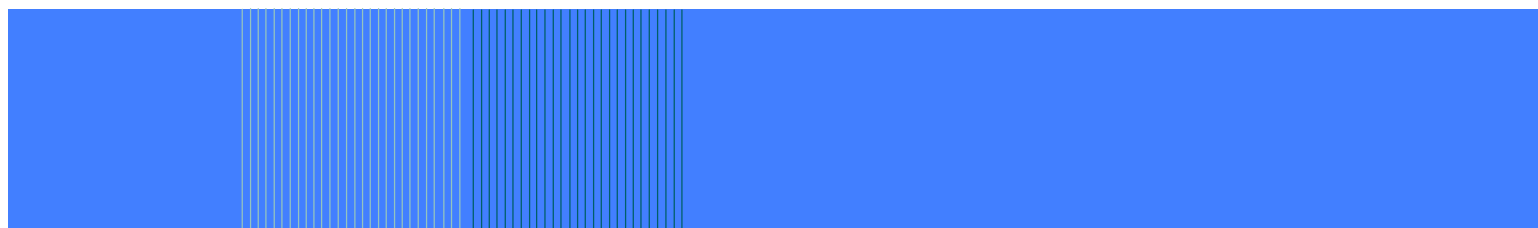


September 4, 2009

# **Race, Sex, and Business Enterprise: Evidence from Augusta, Georgia**

Prepared for Augusta-Richmond County, Georgia



**NERA**  
Economic Consulting

## **Project Team**

**Jon Wainwright, Ph.D., Vice President, NERA**

**Colette Holt, J.D., Colette Holt & Associates**

**Kim Stewart, M.S., Research Analyst, NERA**

**Michael Taylor, B.A., Research Assistant, NERA**

**J. Wesley Stewart, A.A., Research Assistant, NERA**

**Abt SRBI, Inc.**

**J&D Data Services**

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NERA Economic Consulting  
1006 East 39<sup>th</sup> St.  
Austin, Texas 78751  
Tel: +1 512 371 8995  
Fax: +1 512 371 9612  
[www.nera.com](http://www.nera.com)

## About the Project Team—NERA Economic Consulting

**NERA Economic Consulting** is an international firm of economists who understand how markets work. We provide economic analysis and advice to corporations, governments, law firms, regulatory agencies, trade associations, and international agencies. Our global team of more than 600 professionals operates in 25 offices across North and South America, Europe, and Asia Pacific.

NERA provides practical economic advice related to highly complex business and legal issues arising from competition, regulation, public policy, strategy, finance, and litigation. Our more than 45 years of experience creating strategies, studies, reports, expert testimony, and policy recommendations reflects our specialization in industrial and financial economics. Because of our commitment to deliver unbiased findings, we are widely recognized for our independence. Our clients come to us expecting integrity and the unvarnished truth.

NERA's employment and labor experts advise clients on a wide range of issues both inside and outside the courtroom. We have provided expert testimony on statistical issues both at the class certification phase (on issues of commonality and typicality) and at the liability phase (for class or pattern-and-practice cases). Our experts have extensive experience examining issues of statistical liability in discrimination and other wrongful termination claims. We also provide detailed statistical analyses of workforce composition to identify potential disparities in hiring, layoffs, promotions, pay, and performance assessments and have conducted studies on labor union issues and on affirmative action programs for historically disadvantaged business enterprises.

NERA Vice President Dr. Jon Wainwright led the NERA project team for this Study. Dr. Wainwright heads NERA's disparity study practice and is a nationally recognized expert on business discrimination and affirmative action. He has authored a book, several papers, and numerous research studies on the subject, and he has been repeatedly qualified to testify on these and other issues as an expert in state and federal courts. At NERA, Dr. Wainwright directs and conducts economic and statistical studies of discrimination for attorneys, corporations, governments, and non-profit organizations. He also directs and conducts research and provides clients with advice on adverse impact and economic damage matters arising from their hiring, performance assessment, compensation, promotion, termination, or contracting activities.

NERA Economic Consulting  
1006 East 39<sup>th</sup> St.  
Austin, Texas 78751  
Tel: +1 512 371 8995  
Fax: +1 512 371 9612  
[www.nera.com](http://www.nera.com)

## About the Project Team—NERA Research Partners

**Colette Holt & Associates** is a Chicago-based law practice specializing in public sector affirmative action programs. The firm provides legal and consulting services to governments and businesses relating to procurement and contracting; employment discrimination; regulatory compliance; organizational change; program development, evaluation and implementation; and issues relating to inclusion, diversity and affirmative action. Colette Holt, J.D. is a nationally recognized expert in designing and implementing legally defensible affirmative action programs and is a frequent author and media commentator in this area. On this Study, Colette Holt served as legal counsel for NERA, providing advice and recommendations for the study's design and implementation, conducting the review of ARC policies and procedures, conducting interviews with business owners, and drafting key study findings, among other duties.

**Abt SRBI** is a New York-based business with a national reputation for excellence in computer assisted telephone interviewing. Abt SRBI provides analysis in the rapidly evolving markets and public policy areas of communications, financial services, utilities, transportation, media, health and business services. The firm was founded in 1981 with the explicit purpose of combining high quality analytic capabilities with in-house control of the research implementation to ensure accurate, timely and actionable research use by decision makers working in rapidly changing environments. Abt SRBI clients include the Eagleton Institute at Rutgers, the Annenberg Institute at the University of Pennsylvania, and the major networks. Abt SRBI has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this Study, Abt SRBI conducted telephone surveys of race and gender misclassification and of mail survey non-response under the supervision of Abt SRBI Project Manager Andrew Evans.

**J&D Data Services** is a small business enterprise owned by Mr. Joe Deegan and based in Plano, Texas. After a long career with ScanTron, Mr. Deegan started his own business to offer a solid and proven alternative to the time consuming and expensive job of key data entry long associated with mail surveys. The firm helps its clients conserve their surveying resources by designing and delivering survey instruments that can be electronically and automatically scanned upon return and sent directly to electronic format. J&D Data Services has conducted numerous surveys of M/WBEs and non-M/WBEs for NERA over the past seven years. On this assignment they provided printing, postage, mail-out and mail-back service for the subcontract data collection, the mail survey, and the business owner interview invitations.

NERA Economic Consulting  
1006 East 39<sup>th</sup> St.  
Austin, Texas 78751  
Tel: +1 512 371 8995  
Fax: +1 512 371 9612  
[www.nera.com](http://www.nera.com)

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### I. Introduction and Executive Summary

#### A. Introduction

Like many local governments, the government of Augusta-Richmond County (“ARC”) has a long record of commitment to including minority-owned and women-owned business enterprises (“M/WBEs”) in its contracting and procurement activities. As will be documented in this Study, from 2003-2007 ARC has continued to be a source of demand in the Augusta economy for the products and services provided by M/WBEs—demand that, in general, is found to be lacking in the private sector of the Augusta area economy.

Until recently, ARC implemented the Disadvantaged Business Enterprise (“DBE”) affirmative action program for its locally-funded contracts and purchases. ARC commissioned this Study to help to determine whether a future affirmative action program in contracting can meet constitutional requirements. To be effective, enforceable, and legally defensible, a race- and gender-based program must meet the judicial test of constitutional “strict scrutiny.” Strict scrutiny requires current “strong evidence” of the persistence of discrimination, and any remedies adopted must be “narrowly tailored” to that discrimination.

#### B. History of ARC’s Affirmative Action Contracting Programs

ARC first adopted its DBE Program in 1995, based on a Disparity Study commissioned in 1994. The Study made numerous factual findings, including that there was compelling evidence of a large disparity between the utilization of minority and women vendors and their availability in the Richmond County market area, much of which was attributable to the past and present effects of discrimination. The Program required contractors to use good faith efforts to utilize DBEs, but did not set contract goals.

In 2007, the ordinance as challenged by four non-DBEs, as violative of the Equal Protection Clause of the Fourteenth Amendment. Even assuming that “the City will be able to show the existence of a compelling interest to enact an affirmative action plan in 1994 ... the Court need go no further than point out that the Program is still in place 13 years after the Study was compiled without any further investigation into the underlying reasons for creating a program, and without any sunset or expiration provision.... Whether this defect is framed as a failure to show that the City has a compelling interest in 2007, as opposed to 1994, or a failure to prove that the Program adopted in 1994 was narrowly tailored temporally, the end result is that the plaintiffs are substantially likely to succeed on the merits.”<sup>1</sup>

In response, ARC adopted the Local Small Business Opportunity Program (“LSBOP”) in March 2008. The LSBOP was established to promote opportunities for Local Small Businesses (“LSBs”) in ARC’s contracting and procurement activities. Contractors are required to utilize LSBs to perform commercially useful functions to the maximum feasible extent as partners and

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<sup>1</sup> *Thompson Building Wrecking Co., Inc. v. City of Augusta, Georgia*, 2007 U.S. Dist. Lexis 27127, \*22-23 (S.D. Ga. 2007).

## Introduction and Executive Summary

subcontractors. This Program is in addition to the Local Preference Ordinance,<sup>2</sup> and is fully race- and gender-neutral.

### C. The Current Study

To ensure compliance with constitutional mandates and M/WBE best practices, ARC commissioned NERA to examine the past and current status of M/WBEs in ARC's geographic and product markets for contracting and procurement. The results of NERA's Study (hereinafter the "2009 Study"), summarized below, provide the evidentiary record necessary to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in ARC's contracting and procurement activity.

The 2009 Study found both statistical and anecdotal evidence of business discrimination against M/WBEs in the private sector of the Augusta area marketplace. As part of our statistical findings, we surveyed the contracting experiences and credit access experiences of M/WBEs and non-M/WBEs in the Augusta area marketplace and conducted a series of in-depth personal interviews with Augusta area business enterprises, both M/WBE and non-M/WBE. Statistical analyses of ARC's public sector contracting behavior are contained in Chapters III, IV and VII.

The Study is presented in nine chapters, and is designed to answer the following questions:

- Chapter I: Executive Summary
- Chapter II: A detailed and up-to-date overview of current constitutional standards and case law on strict scrutiny review of race- and gender-conscious government efforts in public contracting.
- Chapter III: What is the relevant geographic market for ARC and how is it defined? What are the relevant product markets for ARC and how are they defined?
- Chapter IV: What percentage of all businesses in ARC's relevant markets are owned by minorities and/or women? How are these availability estimates constructed?
- Chapter V: Do minority and/or female wage and salary earners earn less than similarly situated non-minority males? Do minority and/or female business owners earn less from their businesses than similarly situated non-minority males? Are minorities and/or women in the Augusta area less likely to be self-employed than similarly situated non-minority males? How do the findings in the Augusta area differ from the national findings on these questions? How have these findings changed over time?

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<sup>2</sup> ARC Code, § 1-10-6.

- Chapter VI: Do minorities and/or women face discrimination in the market for commercial capital and credit compared to similarly-situated non-minority males? How, if at all, do findings locally differ from findings nationally?
- Chapter VII: To what extent have M/WBEs been utilized by ARC between 2003-2007, and how does this utilization compare to the availability of M/WBEs in the relevant marketplace?
- Chapter VIII: How many M/WBEs experienced disparate treatment in the study period? What types of discriminatory experiences are most frequently encountered by M/WBEs? How do the experiences of M/WBEs differ from those of similar non-M/WBEs regarding the difficulty of obtaining prime contracts and subcontracts?
- Chapter IX: What general policies and procedures govern ARC procurement activities? How does ARC's current Local Small Business Opportunities Program ("LSBOP") operate? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning ARC's contracting operations and affirmative action programs?

In assessing these questions, we present in Chapters III through VIII a series of quantitative and qualitative analyses that compare minority and/or female outcomes to non-minority male outcomes in all of these business-related areas. The remainder of this Executive Summary provides a brief overview of our key findings and conclusions, where applicable.

### **D. Legal Standards for Government Affirmative Action Contracting Programs**

Chapter II provides a detailed and up-to-date overview of current constitutional standards and case law on strict scrutiny of race-conscious government efforts in public contracting. The elements of ARC's compelling interest in remedying identified discrimination and the narrow tailoring of its programs to address that important government concern are delineated, and particular judicial decisions, orders, statutes, regulations, *etc.* are discussed as relevant, with emphasis on critical issues and evidentiary concerns. Examples include the proper tests for examining discrimination and the role of disparities; the applicability of private sector evidence; and ARC's responsibility for narrowly tailoring any race- or gender-conscious contracting program it may adopt.

### **E. Defining the Relevant Markets**

Chapter III describes how the relevant geographic and product markets were defined for this Study. Five years of prime contract and subcontract records were analyzed to determine the geographic radius around ARC that accounts for at least 75 percent of aggregate contract and subcontract spending. These records were also analyzed to determine those detailed industry categories that collectively account for over 99 percent of contract and subcontract spending in excess of \$10,000 in the relevant procurement categories. The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the

## Introduction and Executive Summary

remainder of the Study. ARC's relevant geographic market was determined to be the Augusta-Richmond County, GA-SC Metropolitan Statistical Area.

### F. Statistical Evidence

The *Croson* decision and most of its progeny have held that statistical evidence of disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious, ethnicity-conscious, or gender-conscious M/WBE remedies. Chapter IV estimates current availability levels in the Augusta area for M/WBEs in various industry groups. Chapters V and VI document in considerable detail the extent of disparities facing M/WBEs in the private sector, where contracting and procurement activities are rarely subject to M/WBE requirements. Chapter VII examines whether there is statistical evidence of disparities in the contracting and subcontracting activities of ARC itself. This evidence is also relevant to ARC's responsibility to narrowly tailor any race- or gender-conscious contracting program it may adopt.

#### 1. M/WBE Availability in ARC's Marketplace

##### a. Findings

Table A below provides an executive level summary of the current M/WBE availability estimates derived in this Study. Table A covers all ARC contracting and procurement.

**Table A. Overall Current Availability—By Major Procurement Category and Overall (All Funds)**

| Detailed Industry | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|-------------------|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| CONSTRUCTION      | 15.22            | 2.70     | 0.63  | 0.58            | 13.24               | 32.37 | 67.63     |
| CRS               | 13.36            | 2.78     | 5.84  | 0.62            | 22.33               | 44.93 | 55.07     |
| SERVICES          | 13.11            | 2.01     | 4.45  | 0.71            | 19.82               | 40.11 | 59.89     |
| COMMODITIES       | 6.52             | 0.76     | 3.84  | 0.29            | 19.13               | 30.54 | 69.46     |
| TOTAL             | 14.26            | 2.52     | 1.87  | 0.58            | 15.41               | 34.64 | 65.36     |

Source: Table 4.17.

Notes: For this study, "Black" or "African American" refers to a person having origins in any of the Black racial groups of Africa; "Hispanic" refers to a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; "Asian" refers to a person having origins in any of the original peoples of the Far East, Southeast Asia, India, or the Pacific Islands; "Native American" refers to a person having origins in any of the original peoples of North and South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; and "White" or "non-minority" means a non-Hispanic person having origins in Europe, North Africa, or the Middle East.



### b. Data and Methods

Chapter IV estimates the percentage of firms in ARC's relevant marketplace that are owned by minorities and/or women. For each industry category, M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses in ARC's contracting market area. Determining the total number of businesses in the relevant markets is more straightforward than determining the number of minority-owned or women-owned businesses in those markets. The latter task has three main parts: (1) identifying all listed M/WBEs in the relevant market; (2) verifying the ownership status of listed M/WBEs; and (3) estimating the number of unlisted M/WBEs in the relevant market.

We used Dun & Bradstreet's *MarketPlace* database to determine the total number of businesses operating in the relevant geographic and product markets. *MarketPlace* is one of, if not the most comprehensive and objective available database of U.S. businesses. *MarketPlace* contains over 13 million records, is updated continuously, and revised each quarter. We used the *MarketPlace* database to identify the total number of businesses in each three- four- and six-digit North American Industrial Classification (NAICS) code to which we assigned a product market, or industry, weight. These weights represent the portion of all contract and subcontract dollars attributed to a particular industry. NAICS is the standard governmental system used to classify business establishments by industry. The study included a large, statistically representative sample of ARC's prime contracts and associated subcontracts active between January 2003 and December 2007.

While extensive, *MarketPlace* does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in *MarketPlace*, experience has demonstrated that many more are missed. For this reason, several additional steps were required to identify the appropriate percentage of M/WBEs in the relevant market. First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Augusta and surrounding area. Beyond the information already in *MarketPlace*, NERA collected listings of M/WBEs numerous other public and private entities in and around the Augusta region. The M/WBE businesses identified in this manner are referred to as "listed" M/WBEs.

If the listed M/WBEs we identified are *all* in fact M/WBEs and are the *only* M/WBEs among all the businesses identified, then an estimate of "listed" M/WBE" availability is simply the number of listed M/WBEs divided by the total number of businesses in the relevant market. However, neither of these two conditions holds true in practice and therefore this is not an adequate method for measuring M/WBE availability for two reasons. First, it is likely that some proportion of the M/WBEs listed in the tables are not actually minority-owned or woman-owned. Second, it is likely that there are additional "unlisted" M/WBEs among all the businesses included in our baseline business population. Such businesses do not appear in any of the directories we gathered, and are therefore not included as "listed" M/WBEs.

To account for this, we conducted a supplementary telephone survey on a stratified random sample of firms in our baseline business population that asked them directly about the race and sex of the firm's primary owner(s). We used the results of this survey to statistically adjust our estimates of M/WBE availability for misclassification by race and sex. The resulting estimates of

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M/WBE availability are presented at the end of Chapter IV. These estimates were used in Chapter VII for disparity testing on ARC's own contracting and subcontracting activity during FFY 2003-2007. These availability figures have also be averaged together (using dollar-based contracting weights) to provide guidance to ARC policy makers on overall goal setting.

## 2. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

### a. Findings

Chapter V demonstrates that **current M/WBE availability levels in the Augusta area economy, as measured in Chapter IV, are substantially lower than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner and that these levels are statistically significant.**<sup>3</sup> In other words, minorities and women are substantially and significantly less likely to own their own businesses as the result of marketplace discrimination than would be expected based upon their observable characteristics, including age, education, geographic location, and industry. We find that these groups also suffer substantial and significant earnings disadvantages relative to comparable non-minority males, whether they work as employees or entrepreneurs.

In particular, we found that annual average wages for African-Americans (both sexes) in 2000, both economy-wide and nationwide, were 30 percent lower than for non-minority males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, and non-minority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -13 percent for persons of mixed race to a high of -36 percent for non-minority women. Similar results were observed when the analysis was restricted to the Construction and Construction-Related Professional Services ("CRS") sector. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for non-minority women. All wage and salary disparity analyses were then repeated to test whether observed disparities in the Augusta MSA were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

This analysis demonstrates that minorities and women earn substantially and significantly less than their non-minority male counterparts. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduce the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere "societal discrimination" because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial

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<sup>3</sup> Typically, for a given disparity statistic to be considered "statistically significant" there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn. 140*

opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral marketplace.

Next, we analyzed race and sex disparities in business owner earnings. We observed large, adverse, and statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, and non-minority women consistent with the presence of discrimination in these markets. Large, adverse, and statistically significant business owner earnings disparities were observed overall as well as in the Construction and CRS sector. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Augusta area differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated non-minority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of non-minority males, growth rates will slow, business failure rates will increase, and as demonstrated in this Chapter, business formation rates will decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral marketplace.

Next, we analyzed race and gender disparities in business formation. As with earnings, in almost every case we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in the Construction and CRS sector, and in the Services & Commodities sector.<sup>4</sup> In almost every instance, business formation rates for African-Americans, Hispanics, Asians, Native Americans, and females were substantially and statistically significantly lower than the corresponding non minority male business formation rate.

Finally, as a further check on the statistical findings in this Chapter, we examined evidence from the Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO).<sup>5</sup> These data show large, adverse, and statistically significant disparities between M/WBEs' share of overall revenues and their share of overall firms in the U.S. as a whole, in the states of Georgia and South Carolina.<sup>6</sup> The size of the disparities facing minority and female-owned firms in Georgia and South Carolina is striking. For example, although African-Americans comprise over 12.6 percent of all firms in these two states, they earn less than 2.1 percent of all sales and receipts. African-American employer firms are 4.0 percent of the total but earn only 1.5 percent of sales and receipts. Disparities for women and for other minority groups are also very large in the these two states.

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<sup>4</sup> The Construction and CRS sectors were combined for the analyses in Chapter V, as were the Services & Commodities sector. Elsewhere in the study they are analyzed separately

<sup>5</sup> Formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE).

<sup>6</sup> Sample sizes available in the SBO were too small to allow a separate analysis of the Augusta-Richmond County, GA-SC MSA.

### **b. Data and Methods**

Data from the Current Population Survey (CPS) and the Five Percent Public Use Microdata Samples (PUMS) from the 2000 Decennial Census are used to examine the incidence of minority and female business ownership (self-employment) and the earnings of minority and female business owners across the U.S. and within the Augusta area. The 2000 PUMS contains observations representing five percent of all U.S. housing units and the persons in them (approximately 14 million records), and provides the full range of population and housing information collected in the most recent census. Business ownership status is identified through the “class of worker” variable, which allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings. The CPS is the source of official government statistics on employment and unemployment and has been conducted monthly for over 40 years by the U.S. Census Bureau and the U.S. Department of Labor. Currently, about 56,500 households are interviewed monthly. Households are scientifically selected on the basis of residence to represent the nation as a whole, individual states, and large metropolitan areas.

The SBO collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups, and has been conducted every five years since 1972. Using the SBO data, we calculated the percentage of firms in the US as a whole and in the states of Georgia and South Carolina that were minority-owned or female-owned and compared this to their corresponding share of sales and receipts in that year. We divided the latter by the former and multiplied the product by 100 to create a disparity ratio. Disparity ratios of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms. In Georgia and South Carolina, disparity ratios fell beneath the 80 percent threshold in virtually every case examined.

### **3. Statistical Disparities in Credit/Capital Markets**

In Chapter VI, we analyze current and historical data from the Survey of Small Business Finances, conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from nine customized matching mail surveys we have conducted throughout the nation since 1999. This data examines whether discrimination exists in the small business credit market. Credit market discrimination can have an important effect on the likelihood that M/WBEs will succeed. Moreover, discrimination in the credit market might even prevent such businesses from opening in the first place. This analysis has been held by the courts to be probative of a public entity’s compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that M/WBE firms, particularly African-American-owned firms, suffer discrimination in this market.

The results are as follows:

- Minority-owned firms were particularly likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms did apply for a loan, their requests were substantially more likely to be denied than other groups, even after accounting for differences in factors like size and credit history.

- When minority-owned firms did receive a loan, they paid higher interest rates than comparable non-minority-owned firms.
- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for non-minority-owned firms.
- A greater share of minority-owned firms believes that the availability of credit is the most important issue likely to confront the firm in the next 12 months.
- Judging from the analysis done using data from the SSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in Augusta than in the nation as a whole. The evidence from NERA's own credit surveys in a variety of states and metropolitan areas across the country is entirely consistent with the results from the SSBF.

We conclude that there is evidence of discrimination against M/WBEs in the Augusta area in the small business credit market. This discrimination is particularly acute for African-American-owned firms.

#### 4. M/WBE Public Sector Utilization v. Availability in ARC's Contracting and Procurement Markets, FFY 2000–2005

##### a. Findings

Table B provides an executive level summary of utilization findings for the Study by industry category and M/WBE type.

**Table B. M/WBE Utilization in ARC Contracting and Procurement, 2003-2007**

| M/WBE Type       | Procurement Category |            |              |                 |             |
|------------------|----------------------|------------|--------------|-----------------|-------------|
|                  | Construction (%)     | CRS (%)    | Services (%) | Commodities (%) | Overall (%) |
| African-American | 3.04                 | 18.99      | 4.15         | 1.51            | 3.94        |
| Hispanic         | 0.34                 | 6.87       | 0.66         | 0.00            | 0.74        |
| Asian            | 0.41                 | 0.00       | 0.00         | 0.00            | 0.30        |
| Native American  | 0.21                 | 2.08       | 1.14         | 0.00            | 0.37        |
| Minority total   | 4.01                 | 27.94      | 5.95         | 1.51            | 5.35        |
| Non-minority     | 1.90                 | 0.71       | 1.52         | 0.37            | 1.57        |
| Females          | 5.91                 | 28.65      | 7.47         | 1.88            | 6.92        |
| M/WBE Total      | 94.09                | 71.35      | 92.53        | 98.12           | 93.08       |
| Non-M/WBE Total  |                      |            |              |                 |             |
| Total (%)        | 100.00               | 100.00     | 100.00       | 100.00          | 100.00      |
| Total (\$)       | 308,753,907          | 28,380,493 | 28,352,296   | 63,698,292      | 429,184,988 |

Source: Table 7.1

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Next we compared ARC's and its prime contractors' use of or collaboration with M/WBEs to our measure of M/WBE availability levels in the relevant marketplaces. If M/WBE utilization is statistically significantly lower than measured availability in a given category we report this result as a disparity. Table C provides a top-level summary of our disparity findings for the Study for Construction, CRS, Services, and Commodities. **We find significant evidence of disparity in ARC's contracting and procurement activity, despite the operation of the DBE Program.**

**Table C. Overall Disparity Results-Construction, Services, and Commodities, 2003-2007**

| <b>Procurement Category / M/WBE Type</b> | <b>Utilization</b> | <b>Availability</b> | <b>Disparity Ratio</b> |    |
|--|--------------------|---------------------|------------------------|----|
| All Procurement                          |                    |                     |                        |    |
| African-American                         | 3.94               | 14.26               | 27.64                  | *  |
| Hispanic                                 | 0.74               | 2.52                | 29.47                  |    |
| Asian                                    | 0.30               | 1.87                | 15.99                  |    |
| Native                                   | 0.37               | 0.58                | 62.77                  |    |
| Minority-owned                           | 5.35               | 19.23               | 27.82                  | ** |
| Non-minority female                      | 1.57               | 15.41               | 10.18                  | ** |
| M/WBE total                              | 6.92               | 34.64               | 19.97                  | ** |
| Construction                             |                    |                     |                        |    |
| African-American                         | 3.04               | 15.22               | 19.98                  |    |
| Hispanic                                 | 0.34               | 2.70                | 12.60                  |    |
| Asian                                    | 0.41               | 0.63                | 66.00                  |    |
| Native                                   | 0.21               | 0.58                | 36.78                  |    |
| Minority-owned                           | 4.01               | 19.13               | 20.96                  | *  |
| Non-minority female                      | 1.90               | 13.24               | 14.34                  |    |
| M/WBE total                              | 5.91               | 32.37               | 18.25                  | ** |
| CRS                                      |                    |                     |                        |    |
| African-American                         | 18.99              | 13.36               | .                      |    |
| Hispanic                                 | 6.87               | 2.78                | .                      |    |
| Asian                                    | 0.00               | 5.84                | 0.07                   |    |
| Native                                   | 2.08               | 0.62                | .                      |    |
| Minority-owned                           | 27.94              | 22.60               | .                      |    |
| Non-minority female                      | 0.71               | 22.33               | 3.18                   | *  |
| M/WBE total                              | 28.65              | 44.93               | 63.77                  |    |
| Services                                 |                    |                     |                        |    |
| African-American                         | 4.15               | 13.11               | 31.66                  |    |
| Hispanic                                 | 0.66               | 2.01                | 33.00                  |    |
| Asian                                    | 0.00               | 4.45                | 0.00                   |    |
| Native                                   | 1.14               | 0.71                | .                      |    |
| Minority-owned                           | 5.95               | 20.28               | 29.33                  |    |
| Non-minority female                      | 1.52               | 19.82               | 7.67                   | *  |
| M/WBE total                              | 7.47               | 40.11               | 18.63                  | ** |
| Commodities                              |                    |                     |                        |    |
| African-American                         | 1.51               | 6.52                | 23.17                  | ** |
| Hispanic                                 | 0.00               | 0.76                | 0.00                   |    |
| Asian                                    | 0.00               | 3.84                | 0.00                   | ** |
| Native                                   | 0.00               | 0.29                | 0.00                   |    |
| Minority-owned                           | 1.51               | 11.41               | 13.25                  | ** |
| Non-minority female                      | 0.37               | 19.13               | 1.92                   | ** |
| M/WBE total                              | 1.88               | 30.54               | 6.15                   | ** |

Source: Table 7.10.

Note: “\*” indicates an adverse disparity that is statistically significant at the 10% level or better. “\*\*” indicates the disparity is significant at a 5% level or better. “\*\*\*” indicates significance at a 1% level or better. An empty cell in the Disparity ratio column indicates that no adverse disparity was observed for that category.

### **b. Data and Methods**

As a part of this Study, NERA collected prime contract and associated M/WBE and non-M/WBE subcontractor, subconsultant, and supplier (collectively “subcontractor”) data. Data were collected in the categories of Construction, CRS, Services, and Commodities.

The information was then tabulated and compiled along with the existing M/WBE subcontract information. Next, the prime contract and associated subcontract data were keypunched, collated, cross-referenced, and consolidated to form the Master Contract/Subcontract Database for this Study. Industry codes were assigned at the most detailed level available. The final Master Contract/Subcontract Database included 1,269 prime contracts and 898 associated subcontracts, with a total overall dollar value of \$341.3 million.

### **5. Expected M/WBE Business Formation**

If there is perfect parity in the relevant marketplace, then the disparity ratio will equal 100 because the expected M/WBE availability rate (that is, the M/WBE availability level that would be observed in a non-discriminatory marketplace) will be equivalent to the current M/WBE availability rate. In cases where adverse disparities *are* present in the relevant marketplace, however, as documented in Chapters V and VI of this Study, then the disparity ratio will be less than 100 because expected availability rates will exceed current availability rates. Expected availability levels for ARC’s overall contracting and procurement categories are presented below in Table D.



**Table D. Overall Expected Availability—All Procurement Categories Combined**

| <b>Procurement Category</b> | <b>M/WBE Type</b>   | <b>Current Availability</b> | <b>Expected Availability</b> |
|-----------------------------|---------------------|-----------------------------|------------------------------|
| <b>All</b>                  | African-American:   | 14.26                       | 32.41                        |
|                             | Hispanic            | 2.52                        | 3.93                         |
|                             | Asian               | 1.87                        | 2.02                         |
|                             | Native American     | 0.58                        | 0.89                         |
|                             | Minority total      | 19.23                       | 39.25                        |
|                             | Non-minority female | 15.41                       | 14.82                        |
|                             | M/WBE total         | 34.64                       | 40.00                        |
| <b>Construction</b>         | African-American:   | 15.22                       | 36.76                        |
|                             | Hispanic            | 2.70                        | 3.73                         |
|                             | Asian               | 0.63                        | -                            |
|                             | Native American     | 0.58                        | -                            |
|                             | Minority total      | 19.13                       | n/a                          |
|                             | Non-minority female | 13.24                       | 19.16                        |
|                             | M/WBE total         | 32.37                       | 55.43                        |
| <b>CRS</b>                  | African-American:   | 13.36                       | 32.27                        |
|                             | Hispanic            | 2.78                        | 3.84                         |
|                             | Asian               | 5.84                        | -                            |
|                             | Native American     | 0.62                        | -                            |
|                             | Minority total      | 22.60                       | n/a                          |
|                             | Non-minority female | 22.33                       | 32.32                        |
|                             | M/WBE total         | 44.93                       | 76.93                        |
| <b>Services</b>             | African-American:   | 13.11                       | 27.43                        |
|                             | Hispanic            | 2.01                        | 3.67                         |
|                             | Asian               | 4.45                        | 5.42                         |
|                             | Native American     | 0.71                        | 1.04                         |
|                             | Minority total      | 20.28                       | 37.56                        |
|                             | Non-minority female | 19.82                       | 18.03                        |
|                             | M/WBE total         | 40.11                       | 44.62                        |
| <b>Commodities</b>          | African-American:   | 6.52                        | 13.64                        |
|                             | Hispanic            | 0.76                        | 1.39                         |
|                             | Asian               | 3.84                        | 4.68                         |
|                             | Native American     | 0.29                        | 0.42                         |
|                             | Minority total      | 11.41                       | 20.13                        |
|                             | Non-minority female | 19.13                       | 17.41                        |
|                             | M/WBE total         | 30.54                       | 33.97                        |

Source: Table 7.15.

### **G. Anecdotal Evidence**

#### **1. Survey Evidence of Disparities in ARC's Marketplace**

##### **a. Findings**

Chapter VIII presents the results of a large scale mail survey we conducted of M/WBEs and non-M/WBEs about their experiences and difficulties in obtaining contracts. The survey quantified and compared anecdotal evidence on the experiences of M/WBEs and non-M/WBEs as a method to examine whether any differences might be due to discrimination.

We found that M/WBEs that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, moreover, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by ARC and other public entities in the Augusta area shows that business discrimination continues to fetter M/WBE business opportunities in ARC's relevant markets.

We found that M/WBEs in ARC's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant when firm size and owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses, and that these differences are statistically significant in many cases.

**We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.**

##### **b. Data and Methods**

We mailed M/WBE and non-M/WBE questionnaires to a random sample of firms in ARC's geographic market area. We asked about bid requirements and other factors (bonding and insurance requirements, etc.) affecting their ability to obtain contracts. The questionnaires also asked for characteristics of the firms and the owners, such as the number of years the firm has been in business, the number of employees, firm revenues, and the education level of the primary owner. The M/WBE questionnaire also asked firms whether they experienced disparate treatment in various business dealings (such as commercial loan applications and obtaining price quotes from suppliers or subcontractors) in the past five years due to their race or gender and how often prime contractors who use them as subcontractors on public-sector projects with M/WBE goals also solicit or use them on public-sector or private-sector projects without such goals.

Many survey respondents had done business or attempted to do business with ARC or other public entities in the region in the past five years.

## **2. Interview Evidence of Disparities in ARC's Marketplace**

### **a. Findings**

Chapter VIII also presents the results from a series of in-depth personal interviews conducted with M/WBE and non-M/WBE business owners in the Augusta area. Similar to the survey responses, the interviews strongly suggest that M/WBEs continue to suffer discriminatory barriers to full and fair access to ARC, other public sector, and private sector contracts. Participants reported perceptions of M/WBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans and surety bonds; paying higher prices for supplies than non-M/WBEs; inability to obtain public sector prime contracts; difficulties in receiving fair treatment in obtaining public sector subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors as subcontractors.

While not definitive proof that ARC has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study's extensive statistical evidence, the courts have found to be highly probative of whether, without affirmative interventions, ARC would be a passive participant in a discriminatory local marketplace. It is also highly relevant for narrowly tailoring any M/WBE goals for its locally funded contracts.

### **b. Data and Methods**

Six group sessions were conducted with a total of 114 M/WBE and non-M/WBE business owners. The purpose of these interviews was much the same as the mail surveys. However, the longer interview length and more intimate interview setting were designed to allow for more in-depth responses from business owners.

## **H. M/WBE and LSBOP Program Analysis and Feedback Interviews**

Chapter IX provides a description of ARC's LSBOP Program and a discussion of the operations of the current efforts. We interviewed 114 business owners to solicit their feedback regarding these Programs.

Chapter IX presents a summary of our interviews, which covered the following subjects:

- **Contract specifications**

Numerous owners described what they experienced as overly restrictive contract specifications. Qualifications for professional services contracts are sometimes so stringent that local firms do not submit proposals. Out of town firms are awarded projects but then fail to build local capacity. Others complained that specifications were too vague.

- **Contract solicitation processes**

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In general, firms found it difficult to access information on upcoming opportunities or to contact the appropriate ARC personnel. Several owners expressed dissatisfaction with ARC's use of an outside vendor to provide solicitation information. Overwhelming bidding paperwork was a barrier for minority and women prime contractors as well as large majority firms. Several participants mentioned that ARC did not inform them of the outcome of their bids or proposals. There was a broad consensus that more procurement staff, more professional procurement staff, more outreach, more access to information, and more transparency are needed.

- **Payment**

Professional services firms generally reported reasonably timely payment. This stood in stark contrast to the experiences of construction contractors.

- **ARC's Local Small Business Opportunities Program**

Very few firms had experience with the new LSBOP. For those who had, some M/WBEs reported that they received less business from the new program than under the prior DBE program. Some majority males supported the small business approach in lieu of a M/WBE program. There was also significant support from both DBEs and non-DBEs for a small business setaside, especially in those industries without many subcontracting opportunities, like consulting. This would be a new component of the LSBOP.

- **M/WBE programs**

In general, minorities and women reported that race- and gender-conscious contracting programs are needed to ensure full and fair access to government contracts. Being certified created opportunities that otherwise would not have presented themselves. Affirmative action contracting programs were seen as vital to the continuing viability of their companies. A few firms, however, stated that ARC's prior DBE program had not increased their opportunities.

- **Outreach to M/WBEs**

ARC holds pre-bid conferences for individual solicitations. Some M/WBEs recommended that ARC should hold more procurement fairs, where departments meet with potential vendors. Some owners stressed that the mission of any future M/WBE program must be fully integrated into ARC's overall planning and procurement processes.

Several participants suggested ARC establish a M/WBE committee composed of ARC personnel from the procurement and other critical user departments to address issues of access to information, specifications, qualifications, payment, etc.

- **Supportive Services Programs**

More supportive services were repeatedly cited as a critical need. Bonding and financing assistance was another approach owners urged ARC to adopt.

- **Certification standards and processes**

Several firms, both M/WBEs and non-M/WBEs, expressed concerns about “front” firms, that is, enterprises that were not legitimately minority- or woman-owned, managed and controlled.

- **Meeting M/WBE goals**

The goal setting process and meeting contract goals elicited many comments. Few had any experience with meeting goals on ARC projects, so comments were often directed towards general familiarity with government affirmative action contracting programs. Some majority male owners opposed the concept of race- and gender-conscious programs. Several prime firms commented on their difficulties identifying M/WBEs, and engineers and architects found it even more difficult to meet goals than did construction firms. Minority and women engineers agreed to that is difficult to find and retain talented people of color and women in the Augusta area. M/WBEs and non-M/WBEs recounted that that “pass through” firms were sometimes used to meet goals.

Despite the challenges of meeting affirmative action contracting goals on government contracts, most prime firms reported that M/WBEs performed at or above expectations.

- **Contract performance monitoring**

Concerns were raised about how ARC will monitor compliance with any new M/WBE initiatives.



## II. Legal Standards for Government Affirmative Action Contracting Programs

The Consolidated Government of Augusta-Richmond County (“ARC”) commissioned this study to evaluate whether minority- and women-owned firms in its contracting marketplace have full and fair opportunities to compete for its prime contracts and associated subcontracts. As documented below in Chapter VII, ARC’s prior efforts have produced results—M/WBEs earned approximately 6.9 percent of ARC contracting and purchasing dollars between 2003 and 2007. The courts have made it clear, however, that in order to implement a race- and gender-based program that is effective, enforceable and legally defensible, ARC must meet the judicial test of constitutional “strict scrutiny” to determine the legality of such initiatives. Strict scrutiny requires current “strong evidence” of the persistence of discrimination, and “narrowly tailored” measures to remedy that discrimination.

### A. General Overview of Strict Scrutiny

This area of constitutional law is complex and constantly shifting, and cases are quite fact specific. Over the last 20 years, federal appellate and district courts have developed parameters for establishing a government’s compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. The following are the legal evidentiary and program development issues ARC must consider in evaluating its former M/WBE Procurement Program and future initiatives.

#### 1. *City of Richmond v. J.A. Croson*<sup>7</sup>

*City of Richmond v. J.A. Croson Co.* established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, the Supreme Court for the first time extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that benefits these historic victims of discrimination. Strict scrutiny requires that a government entity prove both its “compelling interest” in remedying identified discrimination based upon “strong evidence,” and that the measures adopted to remedy that discrimination are “narrowly tailored” to that evidence. However benign the government’s motive, race is always so suspect a classification that its use must pass the highest constitutional test of “strict scrutiny.”

The Court struck down the City of Richmond’s Minority Business Enterprise Plan that required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to MBEs. A business located anywhere in the country which was at least 51 percent owned and controlled by “Black, Spanish-speaking, Oriental, Indian, Eskimo, or Aleut” citizens was eligible to participate. The Plan was adopted after a public hearing at which no direct evidence was presented that the City had discriminated on the basis of race in awarding contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond’s population was 50 percent African-

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<sup>7</sup> 488 U.S. 469 (1989).

## Legal Standards for Government Affirmative Action Contracting Programs

American, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors' associations were virtually all White; (c) the City Attorney's opinion that the Plan was constitutional; and (d) general statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

In affirming the court of appeals' determination that the Plan was unconstitutional, Justice Sandra Day O'Connor's plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own illegal conduct:

[A] state or local subdivision...has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction.... [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment.... [I]f the City could show that it had essentially become a "passive participant" in a system of racial exclusion...[it] could take affirmative steps to dismantle such a system.<sup>8</sup>

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by either notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by assuring that the legislative body is pursuing a goal important enough to warrant use of a highly suspect tool.<sup>9</sup> It further ensures that the means chosen "fit" this compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny seeks to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.<sup>10</sup>

Race is so suspect a basis for government action that more than "societal" discrimination is required to restrain racial stereotyping or pandering. The Court provided no definition of "societal" discrimination or any guidance about how to recognize the ongoing realities of history and culture in evaluating race-conscious programs. The Court simply asserted that:

[w]hile there is no doubt that the sorry history of both private and public discrimination in this country has contributed to a lack of opportunities for black entrepreneurs, this observation, standing alone, cannot justify a rigid racial quota in the awarding of public contracts in Richmond, Virginia.... [A]n amorphous claim that there has been past discrimination in a particular industry cannot justify the use of an unyielding racial quota. It is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination.<sup>11</sup>

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<sup>8</sup> *Id.* at 491-92.

<sup>9</sup> See also *Grutter v. Bollinger*, 539 U.S. 306, 327 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision maker for the use of race in that particular context.").

<sup>10</sup> 488 U.S. at 493.

<sup>11</sup> *Id.* at 499.



## Legal Standards for Government Affirmative Action Contracting Programs

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant marketplace or their utilization as subcontractors on City projects. According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps African-Americans' lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own anti-discrimination ordinance. Finally, Richmond could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and in any event it was exercising its powers under Section Five of the Fourteenth Amendment, whereas a local government is further constrained by the Amendment's Equal Protection Clause.<sup>12</sup>

In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."<sup>13</sup>

The foregoing analysis was applied only to African-Americans. The Court then emphasized that there was "absolutely no evidence" against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."<sup>14</sup>

Having found that Richmond had not presented evidence in support of its compelling interest in remedying discrimination—the first prong of strict scrutiny—the Court went on to make two observations about the narrowness of the remedy—the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual MBE had suffered discrimination.<sup>15</sup> Further, Justice O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

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<sup>12</sup> *Id.* at 504; but see *Adarand v. Peña*, 515 U.S. 200 (1995) ("*Adarand III*") (applying strict scrutiny to Congressional race-conscious contracting measures).

<sup>13</sup> 488 U.S. at 510.

<sup>14</sup> *Id.*

<sup>15</sup> See *Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

## Legal Standards for Government Affirmative Action Contracting Programs

Apparently recognizing that the opinion might be misconstrued to categorically eliminate all race-conscious contracting efforts, Justice O'Connor closed with these admonitions:

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion....Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.<sup>16</sup>

### 2. Strict Scrutiny as Applied to Federal Enactments

In *Adarand v. Peña*<sup>17</sup>, the Court again overruled long settled law and extended the analysis of strict scrutiny under the Due Process Clause of the Fourteenth Amendment to federal enactments. Just as in the local government context, when evaluating federal legislation and regulations

[t]he strict scrutiny test involves two questions. The first is whether the interest cited by the government as its reason for injecting the consideration of race into the application of law is sufficiently compelling to overcome the suspicion that racial characteristics ought to be irrelevant so far as treatment by the government is concerned. The second is whether the government has narrowly tailored its use of race, so that race-based classifications are applied only to the extent absolutely required to reach the proffered interest. The strict scrutiny test is thus a recognition that while classifications based on race may be appropriate in certain limited legislative endeavors, such enactments must be carefully justified and meticulously applied so that race is determinative of the outcome in only the very narrow circumstances to which it is truly relevant.<sup>18</sup>

In the wake of *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute<sup>19</sup> and implementing regulations<sup>20</sup> for federal-aid contracts in the

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<sup>16</sup> 488 U.S. at 509 (citations omitted).

<sup>17</sup> 515 U.S. 200 (1995) (*Adarand III*).

<sup>18</sup> *Adarand Constructors, Inc. v. Peña*, 965 F. Supp. 1556, 1569-1570 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV*"); *see also Adarand III*, 515 U.S. at 227.

<sup>19</sup> Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

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transportation industry. To date, every court that has considered the issue has found the regulations to be constitutional on their face.<sup>21</sup> While binding strictly only upon the DBE Program, these cases provide important guidance to ARC about the types of evidence necessary to establish its compelling interest in adopting affirmative action contracting programs and how to narrowly tailor those programs.

Congress had strong evidence of widespread race discrimination in the construction industry.<sup>22</sup> Relevant evidence before Congress included:

- Disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms;
- Disparities in commercial loan denial rates between African-American business owners compared to similarly situated non-minority business owners;
- The large and rapid decline in minorities' participation in the construction industry when affirmative action programs were struck down or abandoned; and
- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers and sureties against minority contractors.<sup>23</sup>

The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.<sup>24</sup>

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<sup>20</sup> 49 CFR Part 26.

<sup>21</sup> See, e.g., *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000) (“*Adarand VII*”), cert. granted then dismissed as improvidently granted, 532 U.S. 941, 534 U.S. 103 (2001); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS 3226 at \*64 (N.D. Ill., Mar. 3, 2004) (“*Northern Contracting I*”).

<sup>22</sup> See also *Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983, 993 (9<sup>th</sup> Cir. 2005), cert. denied, 546 U.S. 1170 (2006) (“In light of the substantial body of statistical and anecdotal material considered at the time of TEA-21’s enactment, Congress had a strong basis in evidence for concluding that- in at least some parts of the country- discrimination within the transportation contracting industry hinders minorities’ ability to compete for federally funded contracts.”).

<sup>23</sup> See *id.*, 407 F.3d at 992-93.

<sup>24</sup> *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d. 964, 970 (8<sup>th</sup> Cir. 2003), cert. denied, 541 U.S. 1041 (2004); see also *Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling

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Next, the regulations were facially narrowly tailored, as was the State of Minnesota's application of those regulations. Unlike the prior program,<sup>25</sup> Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient's federally assisted contracts.
- The goal may be adjusted to reflect the availability of DBEs but for the effects of the DBE Program and of discrimination.
- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.
- The use of quotas and set-asides is limited to only those situations where there is no other remedy.
- The goals are to be adjusted during the year to remain narrowly tailored.
- Absent bad faith administration of the Program, a recipient cannot be penalized for not meeting its goal.
- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable, "wealthy minority owners and wealthy minority firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage."<sup>26</sup>
- Exemptions and waivers from any or all Program requirements are available.

These elements have led the courts to conclude that the program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the Eighth Circuit held that while "[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative ... it does require serious, good faith consideration of workable race-neutral alternatives."<sup>27</sup>

The DBE Program is also flexible. Eligibility is limited to small firms owned by persons whose net worth is less than \$750,000. There are built-in Program time limits, and the State may terminate the Program if it meets its annual overall goal through race-neutral means for two consecutive years. Moreover, the authorizing legislation is subject to Congressional reauthorization that will ensure periodic public debate.

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interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.").

<sup>25</sup> 49 CFR Part 23.

<sup>26</sup> 345 F.3d. at 973.

<sup>27</sup> *Id.* at 972.

## Legal Standards for Government Affirmative Action Contracting Programs

The court next held that the goals are tied to the relevant labor market. “Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*....”<sup>28</sup>

Finally, Congress has taken significant steps to minimize the race-conscious nature of the Program. “[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”<sup>29</sup>

DBE programs based upon a methodology similar to that for ARC, including the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly situated non-minority males, have been held to be narrowly tailored in their application of Part 26. The Minnesota Department of Transportation (Mn/DOT) relied upon a Study conducted by NERA and Colette Holt & Associates to set its DBE goal. The Eighth Circuit opined that while plaintiff

presented evidence attacking the reliability of NERA’s data, it failed to establish that better data was [sic] available or that Mn/DOT was otherwise unreasonable in undertaking this thorough analysis and in relying on its results. The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supports Mn/DOT’s conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there is no evidence that Mn/DOT failed to adjust its use of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require.<sup>30</sup>

Most recently, the Seventh Circuit Court of Appeals affirmed the district court’s trial verdict that the Illinois Department of Transportation’s application of Part 26<sup>31</sup> was narrowly tailored based in large part upon the report and expert trial testimony of NERA and CHA.<sup>32</sup> IDOT had a compelling interest in remedying discrimination in the marketplace for federally funded highway contracts, and its Federal Fiscal Year 2005 DBE Plan was narrowly tailored to that interest and in conformance with the DBE Program regulations.

To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned a NERA Study to meet Part 26’s requirements. Similar to this Study for ARC, the IDOT Study included a custom census of the availability of DBEs in IDOT’s

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<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 973.

<sup>30</sup> *Id.*

<sup>31</sup> Ms. Holt authored IDOT’s DBE goal submission.

<sup>32</sup> *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007) (7<sup>th</sup> Cir. 2007) (“*Northern Contracting III*”). Ms. Holt and Dr. Wainwright testified as IDOT’s expert witnesses at the trial.

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marketplace, weighted by the location of IDOT's contractors and the types of goods and services IDOT procures. NERA estimated that DBEs currently comprise 22.77 percent of IDOT's available firms.<sup>33</sup> The IDOT Study next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated non-minority men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral marketplace the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In addition to the IDOT Study by NERA, the court also relied upon:

- A NERA Study conducted for Metra, the Chicago commuter rail agency;
- Expert reports relied upon by an earlier trial court in finding that the City of Chicago had a compelling interest in its minority and women business program for construction contracts;<sup>34</sup>
- Expert reports and anecdotal testimony presented to the Chicago City Council in support of the City's revised M/WBE Procurement Program ordinance in 2004;
- Anecdotal evidence gathered at IDOT's public hearings on the DBE program;
- Data on DBE involvement in construction projects in markets without DBE goals; and
- IDOT's "zero goal" experiment, where DBEs received approximately 1.5 percent of the total value of the contracts. This was designed to test the results of "race-neutral" contracting policies, that is, the utilization of DBEs on contracts without goals, which several courts have held to be highly relevant and probative of the continuing need for race-conscious remedies.

"Also of note, IDOT examined the system utilized by the Illinois State Toll Highway Authority, which does not receive federal funding; though the Tollway has a DBE goal of 15 percent, this goal is completely voluntary -- the average DBE usage rate in 2002 and 2003 was 1.6 percent. On the basis of all of this data, IDOT adopted 22.77 percent as its Fiscal Year 2005 DBE goal."<sup>35</sup>

Based upon this record, the court of appeals agreed with the trial court's judgment that the Program was narrowly tailored. IDOT's plan was based upon sufficient proof of discrimination such that race-neutral measures alone would be inadequate to assure that DBEs operate on a "level playing field" for government contracts.

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<sup>33</sup> This baseline figure of DBE availability is the "step 1" estimate U.S. DOT grant recipients must make pursuant to 49 CFR §26.45.

<sup>34</sup> *Builders Association of Greater Chicago v. Chicago*, 298 F. Supp. 2d 725 (N.D. Ill. 2003).

<sup>35</sup> *Northern Contracting III*, 473 F.3d at 719.

The stark disparity in DBE participation rates on goals and non-goals contracts, when combined with the statistical and anecdotal evidence of discrimination in the relevant marketplaces, indicates that IDOT's 2005 DBE goal represents a "plausible lower-bound estimate" of DBE participation in the absence of discrimination....Plaintiff presented no persuasive evidence contravening the conclusions of IDOT's studies, or explaining the disparate usage of DBEs on goals and non-goals contracts....IDOT's proffered evidence of discrimination against DBEs was not limited to alleged discrimination by prime contractors in the award of subcontracts. IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity. Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program... Having established the existence of such discrimination, a governmental entity "has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice."<sup>36</sup>

### 3. Preferences for Women

Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of "intermediate scrutiny" has yet to be settled by the Supreme Court.<sup>37</sup> Most courts have applied intermediate scrutiny to preferences for women,<sup>38</sup> and then upheld or struck down the female preference under that standard.<sup>39</sup> This is probably a distinction without meaningful difference, as only one post-*Croson* court has upheld WBE provisions while striking down M/WBE measures.<sup>40</sup> Further, as observed by the Seventh Circuit Court of Appeals, applying intermediate scrutiny to gender "creates the paradox that a public agency may provide stronger remedies for sex discrimination than for race discrimination; it is difficult to see what

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<sup>36</sup> *Northern Contracting II*, at \*82 (internal citations omitted); see *Croson*, 488 U.S. at 492.

<sup>37</sup> Cf. *United States v. Virginia*, 518 U.S. 515 (1996) (applying standard of "exceedingly persuasive justification" in striking down Virginia Military Institute's males only admissions policy).

<sup>38</sup> See, e.g., *Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore et al*, 83 F.Supp.2d 613, 620 (D. Md. 2000).

<sup>39</sup> See, e.g., *Northern Contracting I*, at \*44 (women's status as presumptively socially disadvantaged passes intermediate scrutiny); *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206, 215 n.9 (5th Cir. 1999); *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Engineering Contractors ("Engineering Contractors II")*, 122 F.3d 895, 907-910 (11th Cir. 1997); *Concrete Works, Inc. v. City and County of Denver ("Concrete Works II")*, 36 F.3d 1513, 1519 (10th Cir. 1994); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia ("Philadelphia II")*, 6 F.3d 990, 1009 (3rd Cir. 1993); *Coral Construction Co. v. King County*, 941 F.2d 910, 930-931 (9th Cir. 1991); *Associated Utility Contractors of Maryland, Inc. v. Baltimore*, 83 F.Supp.2d 613 (D. Md. 2000); but see *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (applying strict scrutiny).

<sup>40</sup> *Coral Construction*, 941 F.2d at 932 (applying intermediate scrutiny); cf. *Western States Paving Co.*, 407 F.3d at 991 n.6 (no need to conduct a separate analysis of sex-based classifications under intermediate scrutiny because it would not yield a different result from strict scrutiny).

sense that makes.”<sup>41</sup> Therefore, ARC would be wise to meet the rigors of strict scrutiny for gender preferences.

#### 4. Burdens of Production and Proof

Unlike most legal challenges, the defendant has the initial burden of producing “strong evidence” in support of the program. The plaintiff must then proffer evidence to rebut the government’s case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.<sup>42</sup> There is no need of formal legislative findings,<sup>43</sup> nor “an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination.”<sup>44</sup> When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.<sup>45</sup> A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation or governmental program illegal.<sup>46</sup> The determination whether a plaintiff has met this burden is a question of law, subject to *de novo* review.<sup>47</sup>

#### 5. *Thompson Building Wrecking Co., Inc. v. Augusta, Georgia*<sup>48</sup>

In 2007, a group of majority-owned contractors challenged ARC’s Disadvantaged Business Enterprise Program for locally-funded contracts. The DBE program was based upon a 1994 Disparity Study; the program had not been more recently investigated nor was there a sunset date. Even assuming that ARC established its compelling interest in 1994, the court held “that the Program is still in place 13 years after the Study was compiled without any further investigation into the underlying reasons for creating a program, and without any sunset or expiration provision” rendered it indefensible.<sup>49</sup> ARC commissioned this study in response.

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<sup>41</sup> *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 644 (7<sup>th</sup> Cir. 2001).

<sup>42</sup> *Adarand VII*, 228 F.3d at 1166; *Scott*, 199 F.3d at 219.

<sup>43</sup> *Webster v. Fulton County, Georgia*, 51 F.Supp2d 1354, 1364 (N.D. Ga. 1999), *aff’d*, 218 F.3d 1267 (2000), *cert. denied*, 532 U.S. 942 (2001).

<sup>44</sup> *Concrete Works II*, 36 F.3d at 1522.

<sup>45</sup> *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction*, 941 F.2d at 921.

<sup>46</sup> *Adarand VII*, 228 F.3d at 1166; *Engineering Contractors II*, 122 F.3d at 916; *Contractors Association of Eastern Pennsylvania v. City of Philadelphia (“Philadelphia III”)*, 91 F.3d 586, 597 (3<sup>rd</sup> Cir. 1996); *Concrete Works II*, 36 F.3d at 1522 1523; *Webster*, 51 F. Supp. 2d at 1364; *see also Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

<sup>47</sup> *Adarand VII*, 228 F.3d at 1161; *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 734 (6<sup>th</sup> Cir. 2000); *Scott*, 199 F.3d at 211; *but see Engineering Contractors II*, 122 F.3d at 917 (meeting constitutional test is a question of fact, subject only to appellate review for abuse of discretion).

<sup>48</sup> 2007 U.S. Dist. Lexis 27127 (S.D. Ga. 2007).

<sup>49</sup> *Id.* at \*22-23.



## **B. ARC's Compelling Interest in Remedying Identified Discrimination in Its Contracting Marketplaces**

Much of the discussion in the case law has revolved around what type of evidence is sufficiently “strong” to establish the continuing existence and effects of economic discrimination against minorities resulting in diminished opportunities to do business with the government. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to success is necessary to meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.<sup>50</sup> Specific evidence of discrimination or its absence may be direct or circumstantial, and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.<sup>51</sup>

### **1. Definition of ARC's Marketplace**

*Croson* counsels that a state or local government may only remedy discrimination within its own contracting marketplace. Richmond was specifically faulted for including minority contractors from across the country in its program.<sup>52</sup> Therefore, this Study employs long established economic principles to empirically establish the geographic and industry dimensions of ARC's contracting marketplace in order to ensure that the evidence is narrowly tailored.<sup>53</sup>

### **2. Examining Disparities Between M/WBE Availability and Utilization**

Next, statistical examination of the availability of minorities and women to participate in ARC's projects and the history of utilizing M/WBEs as prime contractors and utilizing M/WBEs as subcontractors by ARC and its prime contractors is required. Simple disparities between ARC's overall minority population and ARC's and its prime contractors' utilization of minority- and women-owned firms are not enough.<sup>54</sup> The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and the utilization of such firms.

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise....In the extreme case, some form of

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<sup>50</sup> *Adarand VII*, 228 F.3d at 1166 (“statistical and anecdotal evidence are appropriate”).

<sup>51</sup> *Id.*

<sup>52</sup> 488 U.S. at 508.

<sup>53</sup> *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore “economic reality”).

<sup>54</sup> *Croson*, 488 U.S. at 501-02; *Drabik*, 214 F.3d at 736.

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narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.<sup>55</sup>

This is known as the “disparity index” or “disparity ratio.” This index is calculated by dividing the utilization of M/WBEs by the availability of M/WBEs. Courts have looked to disparity indices in determining whether *Croson’s* evidentiary foundation is satisfied.<sup>56</sup> An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability.

ARC need not prove that the statistical inferences of discrimination are “correct.” In upholding Denver’s M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver’s determination that remedial action was necessary need not have been based upon “irrefutable or definitive” proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of marketplace discrimination was properly used to meet strict scrutiny. It is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences.<sup>57</sup>

It is also the case that if M/WBEs are overutilized under a program, that does not end the inquiry. Where the government has been implementing affirmative action remedies M/WBE utilization reflects those efforts; it does not signal the end of discrimination. For example, the Tenth Circuit held that Denver’s overutilization of M/WBEs on City projects with goals went only to the weight of the evidence because it reflected the effects of a remedial program. Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. “Particularly persuasive” was evidence that M/WBE participation declined significantly when the program was amended in 1989. The utilization of M/WBEs on City projects has been affected by the affirmative action programs that have been in place in one form or another since 1977. Thus, the non-goals data is [sic] the better indicator of discrimination in public contracting” and supports the position that discrimination was present before the enactment of the ordinances.<sup>58</sup>

Calculations of the availability of minority- and women-owned firms are therefore the crucial foundation for examining affirmative action in contracting.<sup>59</sup> In addition to creating the disparity index, correct measures of availability are necessary to determine whether discriminatory

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<sup>55</sup> *Croson*, 488 U.S. at 509; see *Webster*, 51 F.Supp.2d at 1363, 1375.

<sup>56</sup> *Scott*, 199 F.3d at 218; *Concrete Works II*, 36 F.3d at 1526-1527; *O’Donnell Construction Co., Inc. v. District of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corp. v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).

<sup>57</sup> *Concrete Works, Inc. v. City and County of Denver*, 321 F.3d, 950, 971 (10<sup>th</sup> Cir. 2003), *cert. denied*, 540 U.S. 1027 (2003) (“*Concrete Works IV*”).

<sup>58</sup> *Id.* at 987-988.

<sup>59</sup> *Philadelphia III*, 91 F.3d at 603; *Webster*, 51 F.Supp.2d at 1372 (no explanation for the source nor any indicia of the accuracy or reliability of availability figures).

barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors.<sup>60</sup>

### 3. Unremediated Markets Data

It is also useful to measure M/WBE participation in the absence of affirmative action goals, if such evidence is available. Evidence of race and gender discrimination in relevant “unremediated”<sup>61</sup> markets provides an important indicator of what level of actual M/WBE participation can be expected in the absence of government mandated affirmative efforts to contract with M/WBEs.<sup>62</sup> The courts are clear that the government has a compelling interest in not financing the evil of private prejudice with public dollars.<sup>63</sup> If M/WBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable. The virtual disappearance of M/WBE participation after programs have been enjoined or abandoned strongly indicates substantial barriers to minority subcontractors, “raising the specter of racial discrimination.”<sup>64</sup> This analysis addresses whether the government has been and continues to be a “passive participant” in such discrimination, in the absence of affirmative action remedies.<sup>65</sup> The results of non-goals contracts can help to demonstrate that, but for the interposition of remedial affirmative action measures, discrimination would lead to disparities in government contracting. The “dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated,” was proof of the government’s compelling interest in employing race- and gender-conscious measures.<sup>66</sup> Evidence of unremediated markets “sharpens the picture of local market conditions for MBEs and WBEs.”<sup>67</sup>

### 4. Anecdotal Evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities, including testimony from other governments’ studies and programs, is relevant since it goes to the question of whether observed statistical disparities are due to discrimination and not to some other non-

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<sup>60</sup> *Webster*, 51 F.Supp.2d at 1372; see *Northern Contracting II*, at \*70 (IDOT’s custom census approach was supportable because “discrimination in the credit and bonding markets may artificially reduce the number of registered” minority- and women-owned firms).

<sup>61</sup> “Unremediated market” means “markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination.” *Northern Contracting II*, at \*36.

<sup>62</sup> See, e.g., *Western States*, 407 F.3d at 992 (Congress properly considered evidence of the “significant drop in racial minorities’ participation in the construction industry” after state and local governments removed affirmative action provisions).

<sup>63</sup> See, e.g., *Drabik*, 214 F.3d at 734-735.

<sup>64</sup> *Adarand VII*, 228 F.3d at 1174.

<sup>65</sup> See also *Philadelphia III*, 91 F.3d at 599-601.

<sup>66</sup> *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 737 (N.D. Ill. 2003); see also *Concrete Works IV*, 321 F.3d at 987-988.

<sup>67</sup> *Concrete Works II*, 36 F.3d at 1529.

discriminatory cause or causes.<sup>68</sup> Testimony about discrimination by prime contractors, unions, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority subcontractors' business formation and to their success on governmental projects.<sup>69</sup> While anecdotal evidence is insufficient standing alone, "[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative."<sup>70</sup> "[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough."<sup>71</sup>

There is no requirement that anecdotal testimony be verified. "Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver's witnesses or to relate their own perceptions on discrimination in the Denver construction industry."<sup>72</sup>

### **C. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program**

The following factors must be considered in determining whether any race- and gender-based remedies that might be adopted by ARC are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of M/WBEs and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.<sup>73</sup>

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<sup>68</sup> *Webster*, 51 F.Supp.2d at 1363, 1379.

<sup>69</sup> *Adarand VII*, 228 F.3d at 1168-1172.

<sup>70</sup> *Concrete Works II*, 36 F.3d at 1520, 1530.

<sup>71</sup> *Engineering Contractors II*, 122 F.3d at 926.

<sup>72</sup> *Concrete Works IV*, 321 F.3d at 989.

<sup>73</sup> *United States v. Paradise*, 480 U.S. 149, 171 (1987); *see also Sherbrooke*, 345 F.3d at 971972; *Drabik*, 214 F.3d at 737-738.

The Fourth Circuit Court of Appeals has described the narrow tailoring requirements as follows:

The preferences may remain in effect only so long as necessary to remedy the discrimination at which they are aimed; they may not take on a life of their own. The numerical goals must be waivable if qualified minority applications are scarce, and such goals must bear a reasonable relation to minority percentages in the relevant qualified labor pool, not in the population as a whole. Finally, the preferences may not supplant race-neutral alternatives for remedying the same discrimination.<sup>74</sup>

### 1. Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches have become a necessary component of a defensible and effective M/WBE program.<sup>75</sup> Such measures include unbundling of contracts into smaller units, providing technical support, and addressing issues of financing, bonding, and insurance important to all small and emerging businesses.<sup>76</sup> Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by ARC without resort to using race or gender in its decision-making. Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.<sup>77</sup> At a minimum, entities must track the utilization of M/WBE firms as a measure of their success in the bidding process, including as subcontractors.<sup>78</sup>

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.<sup>79</sup> While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative...however irrational, costly, unreasonable, and unlikely to succeed such alternative might be.... [s]ome degree of practicality is subsumed in the exhaustion requirement.”<sup>80</sup>

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<sup>74</sup> *Maryland Troopers Association, Inc. v. Evans*, 993 F.2d 1072, 1076-77 (4<sup>th</sup> Cir. 1993) (citations omitted).

<sup>75</sup> *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Drabik*, 214 F.3d at 738; *Philadelphia III*, 91 F.3d at 609 (City’s failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies).

<sup>76</sup> See 49 CFR § 26.51.

<sup>77</sup> *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

<sup>78</sup> See, e.g., *Virdi v. DeKalb County School District*, 2005 U.S. App. LEXIS 11203 at n.8 (11<sup>th</sup> Cir. June 13, 2005).

<sup>79</sup> *Grutter*, 529 U.S. at 339.

<sup>80</sup> *Coral Construction*, 941 F.2d at 923.

### 2. Goal Setting

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.<sup>81</sup> It is settled case law that goals should reflect the particulars of the contract, not reiterate annual aggregate targets. For example, in the second challenge to Baltimore's M/WBE Program by the Associated Utility Contractors, the court specifically noted that the 2000 ordinance, in contrast to an earlier program struck down as unconstitutional, specifically requires that goals be set on a contract-by-contract and craft-by-craft basis.<sup>82</sup>

One unanswered question is whether goals or benchmarks for overall agency contracting may be set higher than estimates of actual current availability. To freeze the goals at current head counts would set the results of discrimination — depressed M/WBE availability — as the marker of the elimination of discrimination. It therefore should be reasonable for the government to seek to attempt to level the racial playing field by setting targets somewhat higher than current headcount. For example, 49 CFR Part 26<sup>83</sup> requires grant recipients to determine the availability of DBEs in their marketplaces absent the presence of discrimination.<sup>84</sup> In upholding the DBE regulations, the Tenth Circuit stated that

because Congress has evidence that the effects of past discrimination have excluded minorities from the construction industry and that the number of available minority subcontractors reflects that discrimination, the *existing* percentage of minority-owned businesses is not necessarily an absolute cap on the percentage that a remedial program might legitimately seek to achieve. Absolute proportionality to overall demographics is an unreasonable goal. However, *Croson* does not prohibit setting an aspirational goal above the current percentage of minority-owned businesses that is substantially below the percentage of minority persons in the population as a whole. This aspirational goal is reasonably construed as narrowly tailored to remedy past discrimination that has resulted in homogenous ownership within the industry. It is reasonable to conclude that allocating more than 95% of all federal contracts to enterprises owned by non-minority persons, or more than 90% of federal transportation contracts to enterprises owned by non-minority males, is in and of itself a form of passive participation in discrimination that Congress is entitled to seek to avoid. *See Croson*, 488 U.S. at 492 (Op. of O'Connor, J.).<sup>85</sup>

At least one court has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the Eighth Circuit noted that “[t]hough the underlying

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<sup>81</sup> *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35 percent M/WBE participation in County contracts); *see also Associated Utility Contractors*, 83 F.Supp.2d at 621.

<sup>82</sup> *Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore*, 218 F.Supp.2d 749, 751-52 (D. Md. 2002).

<sup>83</sup> 49 CFR Part 26 governs ARC's receipt of Federal Aviation Administration funds at Airport.

<sup>84</sup> 49 CFR § 26.45.

<sup>85</sup> *Adarand VII*, 228 F.3d at 1181 (emphasis in the original).

estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*.<sup>86</sup> “On the other hand, sheer speculation cannot form the basis for an enforceable measure.”<sup>87</sup>

Goals can be set at various levels of particularity and participation. The entity may set an overall, aspirational goal for its annual, aggregate spending. Specific projects must be subject to subcontracting goals based upon availability of M/WBEs to perform the anticipated scopes of subcontracting. Not only is this legally mandated,<sup>88</sup> but also this approach reduces the need to conduct good faith efforts reviews as well as the temptation to create “front” companies and sham participation to meet unreasonable contract goals.

### 3. Flexibility

It is imperative that remedies not operate as fixed quotas. A M/WBE program must provide for contract awards to firms who fail to meet the subcontracting goals but make good faith efforts to do so. Further, firms who meet the goals cannot be favored over those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT’s DBE program.<sup>89</sup> This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.<sup>90</sup>

### 4. Over-inclusiveness and Under-inclusiveness of ARC’s Affirmative Action Remedies

The over- or under-inclusiveness of those persons to be included in any program is an additional consideration, and goes to whether the remedies truly target the evil identified.<sup>91</sup> The “fit” between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

First, the groups to include must be based upon the evidence.<sup>92</sup> The “random inclusion” of ethnic or racial groups that may never have experienced discrimination in the entity’s marketplace may indicate impermissible “racial politics.”<sup>93</sup> Similarly, the Seventh Circuit, in striking down Cook County’s program, remarked that a “state or local government that has discriminated just against

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<sup>86</sup> *Sherbrooke*, 345 F.3d at 972.

<sup>87</sup> *Id.* (complete absence of evidence for 12-15 percent DBE goal); *see also BAC v. Chicago*, 298 F.Supp.2d at 740 (City’s MBE and WBE goals were “formulistic” percentages not related to the availability of firms).

<sup>88</sup> *See Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

<sup>89</sup> 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

<sup>90</sup> *See, e.g., Sherbrooke*, 345 F.3d at 972.

<sup>91</sup> *Association for Fairness in Business, Inc. v. New Jersey*, 82 F.Supp.2d 353, 360 (D.N.J. 2000).

<sup>92</sup> *Philadelphia II*, 6 F.3d at 1007 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans); *cf. Northeastern Florida Chapter of the AGC v. Jacksonville*, 508 U.S. 656, 660-661 (1993) (new ordinance narrowed to African-Americans and women).

<sup>93</sup> *Webster*, 51 F.Supp.2d at 1380–1381.

blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”<sup>94</sup> However, at least one court has held some quantum of evidence of discrimination for each group is sufficient. The Tenth Circuit held that *Croson* does not require that each group included in the ordinance suffer equally from discrimination.<sup>95</sup>

The level of specificity at which to define beneficiaries is the next question. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and non-minority women,<sup>96</sup> to separate goals for each minority group and women.<sup>97</sup> Ohio’s Program was specifically faulted for lumping together all “minorities,” with the court questioning the legitimacy of forcing African-American contractors to share relief with recent Asian immigrants.<sup>98</sup>

Third, program remedies should be limited to those firms that have suffered actual harm. The DBE Program’s rebuttable presumptions of social and economic disadvantage have been central to the courts’ holdings that it is narrowly tailored. “While TEA-21 creates a rebuttable presumption that members of certain racial minorities fall within that class, the presumption is rebuttable, wealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”<sup>99</sup> Moreover, anyone can challenge the disadvantage of any firm.<sup>100</sup>

### 5. Sharing of the Burden by Third Parties

Failure to make “neutral” changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.<sup>101</sup> However, “innocent” parties can be made to share some of the

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<sup>94</sup> *BAGC v. Cook County*, 256 F.3d at 646.

<sup>95</sup> *Concrete Work IV*, 321 F.3d at 9761.

<sup>96</sup> See 49 CFR §26.45(h) (overall goal must not be subdivided into group-specific goals).

<sup>97</sup> See *Engineering Contractors II*, 122 F.3d at 900 (separate goals for African-Americans, Hispanics and women).

<sup>98</sup> *Drabik*, 214 F.3d at 737; see also *Western States*, 407 F.3d at 998 (“We have previously expressed similar concerns about the haphazard inclusion of minority groups in affirmative action program ostensibly designed to remedy the effects of discrimination.”).

<sup>99</sup> *Sherbrooke*, 345 F.3d at 973; see also *Grutter*, 539 U.S. at 341; *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); cf. *Associated General Contractors v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992), *vacated on other grounds*, 41 F.3d 62 (2nd Cir. 1992) (definition of “disadvantage” was vague and unrelated to goal).

<sup>100</sup> 49 CFR §26.87.

<sup>101</sup> See *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County* (“*Engineering Contractors I*”), 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (County chose not to change its procurement system).



burden of the remedy for eradicating racial discrimination.<sup>102</sup> “Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities.”<sup>103</sup>

### 6. Duration and Review of Programs

“Narrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes.”<sup>104</sup> It was the unlimited duration and lack of review that led to Augusta’s prior DBE program’s being enjoined.<sup>105</sup> One of the factors leading to the court’s holding that the City of Chicago’s M/WBE Program was no longer narrowly tailored was the lack of a sunset provision.<sup>106</sup> As recently reiterated by the Eleventh Circuit Court of Appeals, the “unlimited duration of the [District’s] racial goals also demonstrates a lack of narrow tailoring.... While the District’s effort to avoid unintentional discrimination should certainly be ongoing, its reliance on racial classifications should not.”<sup>107</sup> Similarly, the USDOT DBE Program’s periodic review by Congress has been repeatedly held to provide adequate durational limits.<sup>108</sup>

### D. Table of Authorities

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*Associated General Contractors, Inc. v. Coalition for Economic Equity*, 950 F.2d 1401 (9<sup>th</sup> Cir. 1991).

*Adarand Constructors, Inc. v. Peña* (“*Adarand III*”), 515 U.S. 200 (1995).

*Adarand Constructors, Inc. v. Peña* (“*Adarand IV*”), 965 F. Supp. 1556 (D. Colo. 1997), *rev’d*, 228 F.3d 1147 (2000).

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<sup>102</sup> *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3d at 1183 (“While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities”); *cf. Northern Contracting II*, at \*5 (“Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.”).

<sup>103</sup> *Western States*, 407 F.3d at 995.

<sup>104</sup> *Drabik*, 214 F.3d at 737.

<sup>105</sup> *Thompson*, 2007 U.S. Dist. Lexis 27127 at \*22-23.

<sup>106</sup> *BAGC v. Chicago*, 298 F.Supp.2d at 739; *see also Webster*, 51 F. Supp. 2d at 1382 (one of Fulton County’s telling disqualifiers was that it had been implementing a “quota” program since 1979 with no contemplation of program expiration).

<sup>107</sup> *Virdi*, at \*18.

<sup>108</sup> *See Western States*, 407 F.3d at 995.

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*Adarand Constructors, Inc. v. Slater* (“*Adarand VII*”), 228 F.3d 1147 (10<sup>th</sup> Cir. 2000), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941, 534 U.S. 103 (2001).

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*Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore et al*, 83 F.Supp.2d 613 (D. Md. 2000).

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*Cone Corporation v. Hillsborough County*, 908 F.2d 909 (11<sup>th</sup> Cir. 1990).

*Contractors Association of Eastern Pennsylvania v. City of Philadelphia* (“*Philadelphia II*”), 6 F.3d 990 (3<sup>rd</sup> Cir. 1993).

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*Coral Construction Co. v. King County*, 941 F.2d. 910 (9<sup>th</sup> Cir. 1991).

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*Gratz v. Bollinger*, 539 U.S. 244 (2003).

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*Maryland Troopers Association, Inc. v. Evans*, 993 F.2d 1072, 1076-77 (4<sup>th</sup> Cir. 1993)

*Northeastern Florida Chapter of the AGC v. Jacksonville*, 508 U.S. 656 (1993).

*Northern Contracting, Inc. v. Illinois Department of Transportation* (“*Northern Contracting I*”), 2004 U.S. Dist. LEXIS 3226 (N.D. Ill., Mar. 3, 2004).

*Northern Contracting, Inc. v. Illinois Department of Transportation* (“*Northern Contracting II*”), 2005 U.S. Dist. LEXIS 19868 (Sept. 8, 2005).

*Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7<sup>th</sup> Cir. 2007) (7<sup>th</sup> Cir. 2007) (“*Northern Contracting III*”).

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*United States v. Paradise*, 480 U.S. 149 (1987).

*United States v. Virginia*, 518 U.S. 515 (1996).

*Virdi v. DeKalb County School District*, 2005 U.S. App. LEXIS 11203 (11<sup>th</sup> Cir. 2005).

*W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206 (5<sup>th</sup> Cir. 1999).

*Webster v. Fulton County, Georgia*, 51 F.Supp.2d 1354 (N.D. Ga. 1999).

*Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983 (9<sup>th</sup> Cir. 2005), *cert. denied*, 126 S.Ct. 1332 (2006).

*Wygant v. Jackson Board of Education*, 476 U.S. 267 (1986).

# **Legal Standards for Government Affirmative Action Contracting Programs**

## **2. Statutes**

*Transportation Equity Act for the 21st Century* (“TEA-21”), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113

## **3. Regulations**

49 CFR § 26

### III. Defining the Relevant Markets

#### A. Preparing the Master Contract/Subcontract Database

The U. S. Supreme Court in *Croson* indicated that the U.S. Congress' *national* findings of minority business discrimination in construction and related industries were not specific enough, standing alone, to support a MBE program in the City of Richmond. According to the Court, "[t]he probative value of these findings for demonstrating the existence of discrimination in Richmond is extremely limited."<sup>109</sup> To support its conclusion, the Court noted that the federal DBE program, by including waivers and other provisions whereby DBE affirmative action requirements could be relaxed under certain conditions, "explicitly recognized that the scope of the problem would vary from market area to market area."<sup>110</sup>

The first step, therefore, in our evaluation of M/WBE availability and participation for ARC must be to define the relevant market area for its Construction, CRS, Services, and Commodities procurement.<sup>111</sup> Markets have both a product and a geographic dimension, both of which are considered.<sup>112</sup> For this Study, we define ARC's market area based on its own historical contracting and subcontracting records. We define the geographic market dimension by calculating from zip code data where the majority of ARC's contractors and subcontractors are located, and we define the product market dimension by estimating which North American Industrial Classification System (NAICS) codes that best describe each identifiable contractor, subcontractor, subconsultant, or supplier in those records.<sup>113</sup> In both cases, the definitions are weighted according to how many dollars were spent with firms from each NAICS code so that industries receiving relatively more contracting dollars receive relatively more weight in the estimation of M/WBE availability. Once the geographic and industry parameters of ARC's market area have been defined, we can restrict our subsequent analyses to business enterprises and other phenomena within this market area. Restricting our analyses in this manner narrowly tailors our findings to ARC's specific market area and contracting circumstances.

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<sup>109</sup> *Croson*, 488 U.S. at 504.

<sup>110</sup> *Id.* Since *Croson* concerned a challenge to local program while *Fullilove* concerned a challenge to a federal program, the *Croson* ruling did not directly affect the federal government's array of DBE programs. In the summer of 1995, a 5-4 Supreme Court majority in *Adarand* extended strict scrutiny to the federal government as well, thus formally overturning the *Fullilove* decision.

<sup>111</sup> Although Part 26 and Part 23 do not require that recipients establish the presence of discrimination in their individual markets, determining M/WBE availability and utilization are necessary to narrowly tailor their programs. See 49 CFR § 26.45(c).

<sup>112</sup> See, for example, Areeda, Phillip, and Louis Kaplow, *Antitrust Analysis: Problems, Text, Cases*, New York: Aspen Publishers, 6th Edition, 2004.

<sup>113</sup> Executive Office of the President, Office of Management and Budget, *North American Industrial Classification system: United States, 2007I*, Lanham, MD: Bernan, 2007.

# Defining the Relevant Markets

## 1. ARC Procurement

With assistance from City’s Disadvantaged Business Enterprise, Finance, and Procurement Departments, NERA collected purchase order data for ARC’s construction, construction-related professional services (“CRS”),<sup>114</sup> other professional and general services (“Services”), and supplies and equipment contracts (“Commodities”) that were active between January 2003 and December 2007.<sup>115</sup>

For each purchase order from the study period, we obtained available data from ARC including the prime contractor name and address, purchase description, purchase order number, contractor gender and ethnicity, purchase order date, total contracted amount, and total amount paid. For subcontractors, we worked with ARC to obtain all missing subcontractor information from the relevant prime contractors or vendors. Information collected included subcontractor name and address, subcontractor gender and ethnicity, final award amount, and final amount paid.

We restricted our analysis to ARC purchase orders greater than \$10,000.<sup>116</sup> During the five-year study period, there were 2,449 such purchase orders. Of these, approximately 55 percent were for Commodities, which typically have no subcontracting opportunities. The remaining 45 percent (*i.e.* purchases in Construction, CRS, and Services) *do* have subcontracting opportunities in most cases. Since ARC did not maintain records of non-M/WBE subcontracting activity during the study period, it was necessary to contact a statistically representative sample of ARC’s prime contractors, consultants, and vendors to obtain this information.

We identified 1,014 purchase orders with potential subcontracting opportunities.<sup>117</sup> These purchase orders had a total award value of \$395,363,459. We sampled the largest purchase orders with certainty, and sampled smaller purchase orders randomly with replacement<sup>118</sup> across ARC departments.<sup>119</sup> Our sample included 349 of the 1,014 purchase orders (34.4 percent of the total) and accounted for \$368,733,208 (93.3 percent of the total).

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<sup>114</sup> Construction-related professional services includes engineering services, architectural services, construction management services, testing services, environmental consulting services, and other construction-related consulting services.

<sup>115</sup> Thus, the study also includes contracts that were initiated in prior to January 2003 and still active as of that time.

<sup>116</sup> Purchase orders under \$10,000 accounted for only 5 percent of total purchasing dollars awarded during the study period.

<sup>117</sup> This is slightly lower than 45 percent since we eliminated from the sample universe a small number of purchase orders for which complete vendor address information was not available. We also eliminated a small number of purchase orders for court reporter services which, like Commodities purchases, had no subcontracting opportunities.

<sup>118</sup> “With replacement” means that it is possible for a given purchase order to be included in the sample more than once. In the present context, sampling with replacement has certain desirable statistical properties that sampling without replacement lacks. Fifteen purchases orders were included twice and three purchase orders were included three times.

<sup>119</sup> Fourteen “departments” were identified for this purpose; including the 13 largest, in terms of total purchase orders, plus a fourteenth—“All Other Departments”—to capture the remaining purchase orders. The 13 departments, in descending order of number of purchase orders, are: Airport, Sheriff, Information Tech, Utilities,

With the assistance of ARC staff, we were ultimately able to obtain subcontract information for approximately 96.6 percent of the purchase orders (337 out of 349) and 99 percent of the purchase order dollars (\$365,486,696 out of \$368,733,208) in the sample. These percentages are sufficiently large to be considered representative of the entire universe of contracts and subcontracts being examined. We included an additional 932 purchase orders to represent Commodities purchasing.<sup>120</sup>

Together, as shown below in Tables 3.1 and 3.2, these prime contracts and subcontracts comprise the Master Contract/Subcontract Database compiled for this Study. Table 3.1 shows total number of prime contracts, subcontracts, and dollars paid, by major procurement category. Table 3.2 shows the total number of prime contracts awarded during each year of the study period and total dollar payments associated with those contracts, by major procurement category. Table 3.3 shows a similar distribution according to ARC departments.

### **B. Geographic Market Definition for Contracting and Procurement**

To determine the geographic dimension of ARC's contracting and procurement markets, we used the Master Contract/Subcontract Database, as described in the previous section, to obtain the zip codes and thereby the county and state for each contractor and subcontractor identified in our sample. Using this location information, we then calculated the percentage of ARC contract and subcontract dollars awarded to businesses by state, metropolitan area, and county during the study period.

As discussed above, the geographic market area is defined as that region which accounts for approximately 75 percent of overall contracting and procurement spending by a given state or local government. Contractors located in the Augusta-Richmond County, GA-SC Metropolitan Statistical Area (MSA) account for the vast majority of contracting and procurement expenditures by ARC during the study period.

As shown in Table 3.4, the overall share of expenditures inside the Augusta MSA is 79.4 percent. The share is highest in Construction (84.3 percent) and lowest in Services (44.8 percent). For purposes of this Study, we therefore define the primary geographic market area to be the Augusta-Richmond, GA-SC MSA. The Augusta-Richmond, GA-SC MSA includes, in descending order according to general population size, Richmond County, GA; Aiken County, SC; Columbia County, GA; Edgefield County, SC; Burke County, GA; and McDuffie County, GA. Richmond County alone accounts for over 63 percent of all ARC spending activity in the sample, followed by Columbia County (12 percent), and Aiken County (3 percent).

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Fleet Management, Public Transit, Engineering, Fire, Superior Court, Recreation, Procurement, Landfill/Solid Waste, and Facilities Maintenance.

<sup>120</sup> We included a sample of Commodities purchase orders, rather than the entire universe, so that the Master Contract/Subcontract Database would mirror the distribution of purchase orders by procurement category in the overall universe of ARC purchasing. That universe contained 1,435 Commodities purchase orders with a total dollar value of \$74,660,490. Our Commodities sample contained 932 purchase orders (or 64.9 percent of all Commodities purchase orders) with a total dollar value of \$63,698,292 (or 85.3 percent of all Commodities purchase order dollars). The Commodities sample also included a representative number of court reporter services purchase orders (see footnote 117, *supra*).

## Defining the Relevant Markets

Outside the Augusta MSA, three counties exhibited significant amounts of spending activity, defined as 1.0 percent or more of total dollars awarded and five or more prime or subcontracts with two or more distinct firms. For Construction this included Oconee County, GA; Fulton County, GA; and Cobb County, GA. For CRS this included Cobb County, GA; Cobb County, GA; and Gwinnett County, GA. For Services this included Oconee County, GA; Johnson County, KS; Fulton County, GA; DeKalb County, GA; and Richland County, SC. For Commodities this included Jefferson County, AL; Fulton County, GA; Clayton County, GA; and Lexington County, SC.

### C. Product Market Definition for Contracting and Procurement

Using the major procurement categories for each prime contract and the primary NAICS codes assigned by NERA to each prime contractor and subcontractor in the Master Contract/Subcontract Database, we identified the most important Industry Sub-sectors within each contracting and procurement category, as measured by totals dollars expended.

The relevant NAICS codes and their associated dollar weights appear below in Tables 3.5 through 3.8, for Construction, CRS, Services, and Commodities, respectively. It is clear from these four tables that, although numerous Industry Sub-sectors play a role in ARC's contracting activities, actual contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed.

In Construction, for example, we see from Table 3.5 that one Industry Sub-sector alone (NAICS 236) accounts for almost two-fifths of all contract spending spent and four Sub-sectors account for over 92 percent, with the remaining 8 percent distributed among 31 additional Industry Sub-sectors. In CRS (Table 3.6), we see an even more concentrated pattern—one Industry Sub-sector (NAICS 541) accounts for 90 percent of all contract spending. In Services, one Sub-sector (again NAICS 541) accounts for 60 percent of all contract spending and seven Sub-sectors together account over 90 percent. In Commodities, two Sub-sectors account for more than 60 percent of all spending and six Sub-sectors together account for over 90 percent.

Each Industry Sub-sector (three-digit NAICS) identified in Tables 3.5 through 3.8 consists of several more detailed Industry Groups (four-digit NAICS) and Industries (five-digit and six-digit NAICS). Overall, ARC contracting expenditures in our sample occur in 46 NAICS Industry Sub-sectors, 95 NAICS Industry Groups, and 157 NAICS Industries.

In Construction, ARC contract spending occurs across 35 NAICS Industry Sub-sectors, 65 NAICS Industry Groups, and 101 NAICS Industries. In CRS, ARC contract spending occurs across 9 NAICS Industry Sub-sectors, 14 NAICS Industry Groups, and 17 NAICS Industries. In Services, ARC contract spending occurs across 18 NAICS Industry Sub-sectors, 34 NAICS Industry Groups, and 53 NAICS Industries. In Commodities, ARC contract spending occurs across 28 NAICS Industry Sub-sectors, 52 NAICS Industry Groups, and 76 NAICS Industries.

The resulting percentage weights from these NAICS Industries are used below in Chapter IV to calculate average M/WBE availability figures for Construction, CRS, Services, and



Commodities.<sup>121</sup>

Now that the geographic and industry parameters of ARC's contracting and procurement market area have been established, we will restrict our subsequent analyses, in Chapter IV and beyond, to business enterprises and other phenomena within this specific market area so as to narrowly tailor our findings to ARC's specific contracting circumstances.

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<sup>121</sup> After re-normalizing the percentage weights to sum to 100.

## Defining the Relevant Markets

### D. Tables

**Table 3.1. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category, 2003-2007**

| CONTRACT CATEGORY      | NUMBER OF CONTRACTS | DOLLARS AWARDED    | DOLLARS PAID       |
|------------------------|---------------------|--------------------|--------------------|
| <i>CONSTRUCTION</i>    |                     | <i>308,753,907</i> | <i>234,696,859</i> |
| <i>Prime Contracts</i> | 121                 | 143,871,963        | 122,964,879        |
| <i>Subcontracts</i>    | 722                 | 164,881,944        | 111,731,980        |
| <i>CRS</i>             |                     | <i>28,380,493</i>  | <i>22,927,509</i>  |
| <i>Prime Contracts</i> | 26                  | 14,691,510         | 12,295,337         |
| <i>Subcontracts</i>    | 71                  | 13,688,983         | 10,632,172         |
| <i>SERVICES</i>        |                     | <i>28,352,296</i>  | <i>24,538,668</i>  |
| <i>Prime Contracts</i> | 190                 | 24,291,237         | 20,573,790         |
| <i>Subcontracts</i>    | 105                 | 4,061,059          | 3,964,878          |
| <i>COMMODITIES</i>     |                     | <i>63,698,292</i>  | <i>59,121,272</i>  |
| <i>Prime Contracts</i> | 932                 | 63,698,292         | 59,121,272         |
| <i>Subcontracts</i>    | 0                   | 0                  | 0                  |
| <i>GRAND TOTAL</i>     |                     | <i>429,184,988</i> | <i>341,284,308</i> |
| <i>Prime Contracts</i> | 1,269               | 246,553,002        | 214,955,278        |
| <i>Subcontracts</i>    | 898                 | 182,631,986        | 126,329,030        |

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year of Award

| PROCUREMENT<br>CATEGORY & YEAR<br>OF AWARD | NUMBER OF<br>PRIME<br>CONTRACTS | DOLLARS<br>AWARDED | DOLLARS<br>PAID |
|--|---------------------------------|--------------------|-----------------|
| <i>CONSTRUCTION</i>                        |                                 |                    |                 |
| 2003                                       | 12                              | 18,793,627         | 17,895,229      |
| 2004                                       | 15                              | 26,866,608         | 25,551,899      |
| 2005                                       | 25                              | 46,957,084         | 46,376,140      |
| 2006                                       | 31                              | 98,853,453         | 98,247,938      |
| 2007                                       | 38                              | 117,283,135        | 46,625,653      |
| TOTAL                                      | 121                             | 308,753,907        | 234,696,859     |
| <i>CRS</i>                                 |                                 |                    |                 |
| 2003                                       | 12                              | 4,809,616          | 3,999,172       |
| 2004                                       | 4                               | 8,855,422          | 7,257,563       |
| 2005                                       | 4                               | 6,300,911          | 6,300,911       |
| 2006                                       | 4                               | 3,983,576          | 3,148,888       |
| 2007                                       | 2                               | 4,430,968          | 2,220,975       |
| TOTAL                                      | 26                              | 28,380,493         | 22,927,509      |
| <i>SERVICES</i>                            |                                 |                    |                 |
| 2003                                       | 41                              | 5,450,667          | 7,664,739       |
| 2004                                       | 37                              | 10,336,862         | 5,712,833       |
| 2005                                       | 36                              | 4,461,455          | 3,679,288       |
| 2006                                       | 45                              | 5,437,318          | 4,864,918       |
| 2007                                       | 31                              | 2,665,995          | 2,616,891       |
| TOTAL                                      | 190                             | 28,352,296         | 24,538,668      |

## Defining the Relevant Markets

**Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year of Award, Cont'd**

| <b>PROCUREMENT<br/>CATEGORY &amp; YEAR<br/>OF AWARD</b> | <b>NUMBER OF<br/>PRIME<br/>CONTRACTS</b> | <b>DOLLARS<br/>AWARDED</b> | <b>DOLLARS<br/>PAID</b> |
|---|--|----------------------------|-------------------------|
| <i>COMMODITIES</i>                                      |  |                            |                         |
| 2003  | 168                                      | 10,373,748                 | 10,160,616              |
| 2004  | 173                                      | 14,107,086                 | 13,691,376              |
| 2005  | 165                                      | 10,192,363                 | 10,090,490              |
| 2006  | 184                                      | 12,160,378                 | 12,028,031              |
| 2007  | 242                                      | 16,864,717                 | 13,150,759              |
| TOTAL   | 932                                      | 63,698,292                 | 59,121,272              |
| <i>ALL</i>  |  |                            |                         |
| 2003  | 233                                      | 39,427,658                 | 39,719,757              |
| 2004  | 229                                      | 60,165,978                 | 52,213,671              |
| 2005  | 230                                      | 67,911,813                 | 66,446,829              |
| 2006  | 264                                      | 120,434,724                | 118,289,774             |
| 2007  | 313                                      | 141,244,815                | 64,614,277              |
| TOTAL   | 1269                                     | 429,184,988                | 341,284,308             |

Source: See Table 3.1.

**Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by Department**

| DEPARTMENT             | NUMBER OF<br>PRIME<br>CONTRACTS | DOLLARS<br>AWARDED | DOLLARS<br>PAID |
|------------------------|---------------------------------|--------------------|-----------------|
| <i>CONSTRUCTION</i>    | 121                             | 308,753,907        | 234,696,859     |
| AIRPORT-BUSH FIELD     | 7                               | 28,662,269         | 28,412,269      |
| ALL OTHER DEPARTMENTS  | 4                               | 1,241,282          | 1,207,094       |
| ENGINEERING DEPARTMENT | 22                              | 26,506,169         | 24,335,833      |
| FACILITIES MAINTENANCE | 6                               | 3,911,200          | 3,506,603       |
| FIRE DEPARTMENT        | 5                               | 1,810,196          | 1,762,937       |
| FLEET MANAGEMENT       | 2                               | 529,677            | 529,677         |
| INFORMATION TECH       | 2                               | 84,050             | 84,050          |
| LANDFILL SOLID WASTE   | 8                               | 12,788,884         | 11,897,956      |
| PROCUREMENT            | 2                               | 327,503            | 532,364         |
| PUBLIC TRANSIT         | 1                               | 19,390             | 19,390          |
| RECREATION DEPARTMENT  | 2                               | 598,798            | 597,874         |
| SHERIFF                | 2                               | 192,478            | 192,478         |
| UTILITIES              | 58                              | 232,082,011        | 161,618,334     |
| <i>CRS</i>             | 26                              | 28,380,493         | 22,927,509      |
| ALL OTHER DEPARTMENTS  | 1                               | 1,349,638          | 1,023,924       |
| ENGINEERING DEPARTMENT | 6                               | 2,132,325          | 1,682,739       |
| FACILITIES MAINTENANCE | 2                               | 6,958,116          | 4,252,409       |
| LANDFILL SOLID WASTE   | 1                               | 385,000            | 381,150         |
| SHERIFF                | 1                               | 20,000             | 20,000          |
| UTILITIES              | 15                              | 17,535,414         | 15,567,287      |
| <i>SERVICES</i>        | 190                             | 28,352,296         | 24,538,668      |
| AIRPORT-BUSH FIELD     | 19                              | 646,751            | 642,126         |
| ALL OTHER DEPARTMENTS  | 31                              | 3,625,200          | 3,408,309       |
| COURT-SUPERIOR         | 19                              | 733,224            | 730,619         |
| ENGINEERING DEPARTMENT | 6                               | 1,745,956          | 1,299,926       |
| FACILITIES MAINTENANCE | 5                               | 621,662            | 621,662         |
| FIRE DEPARTMENT        | 2                               | 215,550            | 215,550         |
| FLEET MANAGEMENT       | 9                               | 9,463,253          | 4,741,668       |
| INFORMATION TECH       | 53                              | 4,134,793          | 4,192,993       |
| LANDFILL SOLID WASTE   | 3                               | 3,099,884          | 2,363,143       |
| PROCUREMENT            | 7                               | 380,827            | 375,262         |

## Defining the Relevant Markets

| DEPARTMENT             | NUMBER OF<br>PRIME<br>CONTRACTS | DOLLARS<br>AWARDED | DOLLARS<br>PAID |
|------------------------|---------------------------------|--------------------|-----------------|
| PUBLIC TRANSIT         | 5                               | 2,114,524          | 2,114,524       |
| RECREATION DEPARTMENT  | 2                               | 156,358            | 170,830         |
| SHERIFF                | 13                              | 586,940            | 586,940         |
| UTILITIES              | 16                              | 827,374            | 3,075,116       |
| <i>COMMODITIES</i>     | 932                             | 63,698,292         | 59,121,272      |
| AIRPORT-BUSH FIELD     | 323                             | 24,320,068         | 23,836,359      |
| ALL OTHER DEPARTMENTS  | 31                              | 1,216,330          | 914,680         |
| COURT-SUPERIOR         | 6                               | 339,101            | 320,373         |
| ENGINEERING DEPARTMENT | 44                              | 3,163,193          | 2,993,480       |
| FACILITIES MAINTENANCE | 6                               | 343,686            | 366,880         |
| FIRE DEPARTMENT        | 23                              | 1,635,450          | 1,632,139       |
| FLEET MANAGEMENT       | 83                              | 12,493,220         | 11,711,470      |
| INFORMATION TECH       | 109                             | 6,582,602          | 5,660,467       |
| LANDFILL SOLID WASTE   | 7                               | 883,597            | 777,312         |
| PROCUREMENT            | 8                               | 1,651,686          | 1,671,251       |
| PUBLIC TRANSIT         | 50                              | 1,452,604          | 1,452,605       |
| RECREATION DEPARTMENT  | 14                              | 654,400            | 516,469         |
| SHERIFF                | 124                             | 2,566,229          | 2,405,521       |
| UTILITIES              | 104                             | 6,396,126          | 4,862,266       |

Source: See Table 3.1. Note: “N/A” indicates that no division assignment was recorded in the contracting records examined.

**Table 3.4. Distribution of City Contracting and Procurement Dollars by Geographic Location**

| <b>Location</b>        | <b>Construction<br/>(%)</b> | <b>AE<br/>(%)</b> | <b>Services<br/>(%)</b> | <b>Commodities<br/>(%)</b> | <b>Overall<br/>(%)</b> |
|------------------------|-----------------------------|-------------------|-------------------------|----------------------------|------------------------|
| Inside Augusta<br>MSA  | 84.3                        | 71.2              | 44.8                    | 74.3                       | 79.4                   |
| Outside Augusta<br>MSA | 15.7                        | 28.8              | 55.2                    | 25.7                       | 20.6                   |
| Inside Georgia         | 89.8                        | 86.7              | 62.8                    | 82.1                       | 86.6                   |
| Outside Georgia        | 10.2                        | 13.3              | 37.2                    | 17.9                       | 13.4                   |

Source: See Table 3.1.

## Defining the Relevant Markets

**Table 3.5. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction**

| NAICS Sub-sector | NAICS Description   | Percentage | Cumulative Percentage |
|------------------|---|------------|-----------------------|
| 236              | Construction of Buildings                                   | 39.06      | 39.06                 |
| 237              | Heavy and Civil Engineering Construction                    | 33.95      | 73.01                 |
| 238              | Specialty Trade Contractors                                 | 13.95      | 86.96                 |
| 423              | Merchant Wholesalers, Durable Goods                         | 5.21       | 92.16                 |
| 541              | Professional, Scientific, and Technical Services            | 3.48       | 95.65                 |
| 333              | Machinery Manufacturing                                     | 1.13       | 96.78                 |
| 562              | Waste Management and Remediation Services                   | 0.86       | 97.63                 |
| 327              | Nonmetallic Mineral Product Manufacturing                   | 0.69       | 98.33                 |
| 484              | Truck Transportation  | 0.28       | 98.61                 |
| 561              | Administrative and Support Services                         | 0.27       | 98.88                 |
| 212              | Mining (except Oil and Gas)                                 | 0.26       | 99.14                 |
| 332              | Fabricated Metal Product Manufacturing                      | 0.12       | 99.26                 |
| 326              | Plastics and Rubber Products Manufacturing                  | 0.11       | 99.37                 |
| 339              | Miscellaneous Manufacturing                                 | 0.11       | 99.48                 |
| 424              | Merchant Wholesalers, Nondurable Goods                      | 0.10       | 99.58                 |
| 442              | Furniture and Home Furnishings Stores                       | 0.08       | 99.66                 |
| 444              | Building Material and Garden Equipment and Supplies Dealers | 0.07       | 99.72                 |
| 532              | Rental and Leasing Services                                 | 0.06       | 99.78                 |
| 453              | Miscellaneous Store Retailers                               | 0.06       | 99.84                 |
| 321              | Wood Product Manufacturing                                  | 0.05       | 99.89                 |
| 811              | Repair and Maintenance                                      | 0.02       | 99.92                 |
|                  | Balance of industries (14 industries)                       | 0.08       | 100.00                |
|                  | <i>TOTAL - \$308,753,9078</i>                               |            |                       |

Source: See Table 3.1.



**Table 3.6. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: CRS**

| NAICS Sub-sector | NAICS Description                                | Percentage | Cumulative Percentage |
|------------------|--|------------|-----------------------|
| 541              | Professional, Scientific, and Technical Services | 90.36      | 90.36                 |
| 238              | Specialty Trade Contractors                      | 6.39       | 96.75                 |
| 562              | Waste Management and Remediation Services        | 2.08       | 98.83                 |
| 561              | Administrative and Support Services              | 0.50       | 99.34                 |
| 524              | Insurance Carriers and Related Activities        | 0.41       | 99.74                 |
| 423              | Merchant Wholesalers, Durable Goods              | 0.17       | 99.91                 |
|                  | Balance of industries (3 industries)             | 0.09       | 100.00                |
|                  | <i>TOTAL – 28,380,493</i>                        |            |                       |

Source: See Table 3.1.

## Defining the Relevant Markets

**Table 3.7. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services**

| NAICS Sub-sector | NAICS Description                                | Percentage | Cumulative Percentage |
|------------------|--|------------|-----------------------|
| 541              | Professional, Scientific, and Technical Services | 59.95      | 59.95                 |
| 423              | Merchant Wholesalers, Durable Goods              | 9.54       | 69.49                 |
| 511              | Publishing Industries (except Internet)          | 9.47       | 78.96                 |
| 238              | Specialty Trade Contractors                      | 3.96       | 82.92                 |
| 333              | Machinery Manufacturing                          | 3.67       | 86.60                 |
| 532              | Rental and Leasing Services                      | 2.99       | 89.58                 |
| 561              | Administrative and Support Services              | 2.17       | 91.75                 |
| 334              | Computer and Electronic Product Manufacturing    | 2.14       | 93.89                 |
| 236              | Construction of Buildings                        | 1.92       | 95.80                 |
| 562              | Waste Management and Remediation Services        | 1.22       | 97.02                 |
| 517              | Telecommunications                               | 0.77       | 97.80                 |
| 518              | Data Processing, Hosting and Related Services    | 0.74       | 98.54                 |
| 237              | Heavy and Civil Engineering Construction         | 0.74       | 99.27                 |
| 443              | Electronics and Appliance Stores                 | 0.51       | 99.79                 |
| 812              | Personal and Laundry Services                    | 0.13       | 99.91                 |
|                  | Balance of industries (3 industries)             | 0.09       | 100.00                |
|                  | <i>TOTAL - \$28,352,296</i>                      |            |                       |

Source: See Table 3.1.

**Table 3.8. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Commodities**

| NAICS Sub-sector | NAICS Description   | Percentage | Cumulative Percentage |
|------------------|---|------------|-----------------------|
| 424              | Merchant Wholesalers, Nondurable Goods                      | 40.14      | 40.14                 |
| 423              | Merchant Wholesalers, Durable Goods                         | 20.57      | 60.71                 |
| 441              | Motor Vehicle and Parts Dealers                             | 12.63      | 73.34                 |
| 334              | Computer and Electronic Product Manufacturing               | 8.47       | 81.81                 |
| 237              | Heavy and Civil Engineering Construction                    | 6.83       | 88.64                 |
| 443              | Electronics and Appliance Stores                            | 3.99       | 92.63                 |
| 541              | Professional, Scientific, and Technical Services            | 2.26       | 94.90                 |
| 238              | Specialty Trade Contractors                                 | 0.96       | 95.86                 |
| 532              | Rental and Leasing Services                                 | 0.94       | 96.79                 |
| 325              | Chemical Manufacturing                                      | 0.58       | 97.38                 |
| 562              | Waste Management and Remediation Services                   | 0.48       | 97.86                 |
| 511              | Publishing Industries (except Internet)                     | 0.46       | 98.32                 |
| 451              | Sporting Goods, Hobby, Book, and Music Stores               | 0.33       | 98.65                 |
| 212              | Mining (except Oil and Gas)                                 | 0.25       | 98.90                 |
| 323              | Printing and Related Support Activities                     | 0.24       | 99.14                 |
| 339              | Miscellaneous Manufacturing                                 | 0.22       | 99.36                 |
| 621              | Ambulatory Health Care Services                             | 0.21       | 99.57                 |
| 332              | Fabricated Metal Product Manufacturing                      | 0.11       | 99.68                 |
| 333              | Machinery Manufacturing                                     | 0.07       | 99.75                 |
| 517              | Telecommunications  | 0.05       | 99.80                 |
| 322              | Paper Manufacturing   | 0.04       | 99.84                 |
| 444              | Building Material and Garden Equipment and Supplies Dealers | 0.03       | 99.87                 |
| 561              | Administrative and Support Services                         | 0.03       | 99.89                 |
| 453              | Miscellaneous Store Retailers                               | 0.03       | 99.92                 |
|                  | Balance of industries (4 industries)                        | 0.08       | 100.00                |
|                  | <i>TOTAL - \$63,698,29</i>                                  |            |                       |

Source: See Table 3.1.

## **M/WBE Availability in Augusta's Marketplace**

## IV. M/WBE Availability in Augusta's Marketplace

### A. Identifying Businesses in the Relevant Markets

M/WBE availability (unweighted) is defined as the number of M/WBEs divided by the total number of businesses in ARC's contracting market area—what we will refer to as the Baseline Business Universe.<sup>122</sup> Determining the total number of businesses in the relevant markets, however, is more straightforward than determining the number of minority- or women-owned businesses in those markets. The latter task has three main parts: (1) identify all listed M/WBEs in the relevant market; (2) verify the ownership status of listed M/WBEs; and (3) estimate the number of unlisted M/WBEs in the relevant market. This section describes how these tasks were accomplished for ARC.

It is important to note that NERA's availability analysis is free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. Factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the marketplace. Despite the obvious relationship, some commentators argue that disparities should only be assessed between firms with similar "capacities."<sup>123</sup> However, the courts in our view have properly refused to make the results of discrimination the benchmarks for non-discrimination.<sup>124</sup> They have acknowledged that M/WBEs may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these "capacity" factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as "control" variables in a disparity study.<sup>125</sup>

#### 1. Estimate the Total Number of Businesses in the Market

We used Dun & Bradstreet's *MarketPlace* database to determine the total number of businesses operating in the relevant geographic and product markets (these markets were discussed in the previous section). *MarketPlace* is a comprehensive database of U. S. businesses. This database contains almost 18 million records and is updated continuously. Dun & Bradstreet issues a

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<sup>122</sup> To yield a percentage, the resulting figure is multiplied by 100.

<sup>123</sup> See Remarks of George LaNoue, U.S. Commission on Civil Rights, "Disparity Studies as Evidence of Discrimination in Federal Contracting," May 2006 (LaNoue was rejected as an expert witness by the court in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002)).

<sup>124</sup> *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 981, 983 (10<sup>th</sup> Cir. 2003), *cert. denied*, 124 S.Ct. 556 (2003) (emphasis in the originals) ("MWBE construction firms are generally smaller and less experienced *because* of discrimination.... Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a *particular contract*.").

<sup>125</sup> *Concrete Works*, 321 F.3d at 981 (emphasis in the original). See also, NERA Economic Consulting and Colette Holt & Associates, *National Model Disadvantaged Business Enterprise Availability and Disparity Study Project for State Transportation Departments*, Final Report for NCHRP-20-76, Appendix B (forthcoming, 2009).

revised version each quarter. Each record in *MarketPlace* represents a business and includes the company name, address, telephone number, NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each business by Dun & Bradstreet) and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U. S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We used the *MarketPlace* database to identify the total number of businesses in each six-digit NAICS code to which we had anticipated assigning a product market weight. Table 4.1 shows the number of businesses identified in each NAICS sub-sector within the Construction category, along with the associated industry weight according to dollars expended. Comparable data for CRS, Services, and Commodities appears in Tables 4.2-4.4, respectively.

Although numerous industries play a role in ARC's Baseline Business Universe, contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed, as documented above in Chapter III.

## 2. Identify Listed M/WBEs

While extensive, *MarketPlace* does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in *MarketPlace*, experience has demonstrated that many more are missed. For this reason, several additional steps were required to identify the appropriate percentage of M/WBEs in the relevant market.

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Augusta-Richmond County and surrounding areas. Beyond the information already in *MarketPlace*, NERA collected lists of M/WBEs from Augusta-Richmond County as well as other public and private entities in and surrounding Augusta-Richmond County. Specifically, directories were included from:<sup>126</sup> Business Research Services, Inc., Diversity Information Resources National Minority and Women-Owned Businesses, DiversityBusiness.com, Small Business Administration/Central Contractor Registry, Athens-Clarke County, Atlanta Board of Education, Black Pages-Augusta, Chatham County, Albany-Dougherty County, City of Atlanta, City of Savannah, Cobb County, Georgia Department of

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<sup>126</sup> We also obtained information from certain entities that was duplicative of either Dun & Bradstreet or one or more of the other sources listed above. These entities included the Airport Area Chamber of Commerce, Athens Ben Epps Airport, Augusta Regional Airport, Augusta State University, City of Columbus, City of Dunwoody, City of East Point, City of Redan, City of Rome, City of Roswell, City of Sandy Springs, Cobb County Airport-McCollum Field, Columbus Metro Airport, DeKalb Peachtree Airport, Falcon Field Airport, Georgia Department of Economic Development, Georgia's Women's Business Council, Hartsfield-Jackson Atlanta International Airport, Lexington County School District 1, Middle Georgia Regional Airport at Macon, Robins Air Force Base, Small Business Development Center at Georgia State University, Small Business Development Center at Kennesaw State University, South Carolina Diversity Council, Southwest Georgia Regional Airport, the National Center for American Indian Enterprise Development, and the University of West Georgia.

Administrative Services, Georgia DOT, Georgia Institute of Technology, Georgia Small Business Development Center, United Indian Development Association, Women's Business Enterprise National Council-Georgia, Black Pages-Columbia, Black Pages-Charleston, Black Pages-Greenville, City of Charleston, City of Columbia, Hispanic Connections, South Carolina Chamber of Commerce, South Carolina DOT, and South Carolina Governor's Office of Small and Minority Business Assistance.<sup>127</sup>

If the listed M/WBEs identified in the Tables 4.5-4.8 are in fact *all* M/WBEs and are the *only* M/WBEs among all the businesses identified in Tables 4.1-4.4, then an estimate of "listed" M/WBE availability is simply the number of listed M/WBEs (taken from Tables 4.5-4.8, respectively) divided by the total number of businesses in the relevant market (taken from Tables 4.1-4.4, respectively). However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring M/WBE availability.

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<sup>127</sup> A number of public and private organizations we contacted were unable to provide relevant lists or directories. The entities that were unable to provide directories, either because they had no list or the list they had does not include race/sex information included: Allendale Public Schools, American-Nigerian International Chamber of Commerce, Barnwell School District, Bulloch County Schools, Burke County Public Schools, Central Savannah River Area Regional Development Center, City of Aiken, City of Alpharetta, City of Hinesville, City of Peachtree, City of Smyrna, City of Valdosta, City of Warner Robins, Columbia County Board of Education, Emory University Procurement Services, Fayette County Development Authority, Georgia Department of Education Facilities Services Resources, Glascock County Consolidated Schools, Hampton County School District 2, Hancock County School District, Hispanic American Center for Economic Development, Hong Kong Association of Atlanta, Japan American Society of Georgia, Jefferson County School System, Jenkins County Schools, Johnson County Schools, Lexington County School District 2, Lincoln County Board of Education, Metro Atlanta Chamber of Commerce, Mt. Jade Science and Technology Association, National Association of Chinese-Americans, Paine College, Philippine-American Chamber of Commerce of Georgia, Richland-Lexington Airport District Commission, Savannah-Chatham County Public School System, South Carolina Commission for Minority Affairs, Taliaferro County School System, National Association for the Self-Employed, Troy University, Wilkes County Schools, Women's Economic Development Agency, Japanese Chamber of Commerce of Georgia, and the Savannah Area Chamber.

Several entities were contacted repeatedly, both by NERA and by the City but did not respond, including: Aiken County Public Schools, Asian American Chamber of Commerce of Georgia, Inc., Athens Area Chamber of Commerce, Carolina's Minority Supplier Development Council, Mexican-American Business Chamber of Commerce, Atlanta Black Chamber of Commerce, Atlanta Taiwanese Chamber of Commerce, Candler County School District, City of Macon, City of Marietta, Clarke County School District, Columbia Metropolitan Airport, District 5 of Lexington and Richmond Counties, Edgefield County School District, Emanuel County Schools, Georgia Black Chamber of Commerce, Georgia Indo-American Chamber of Commerce, Georgia Mountains Economic Development Corporation, Georgia Power Co., Greene County Board of Education, Korea SEUS Chamber of Commerce, Korean-American Chamber of Commerce, Lexington County School District 3, Lexington County School District 4, McDuffie County Schools, Medical College of Georgia, Minority Professional Network, Morgan County Schools, National Association of Women Business Owners, National Association of Women in Construction, Richmond County School System, South Carolina Statewide Minority Business Enterprise Center, Treutlen County Board of Education, University of South Carolina Aiken, Warren County Public Schools, and Washington County Public Schools.

Some entities refused to provide the information we asked for including DeKalb County, the Augusta Black Chamber of Commerce, Beaufort County Black Chamber of Commerce, Chinese Business Association of Atlanta, Georgia Hispanic Chamber of Commerce, Georgia Minority Supplier Development Council, and the University of Georgia.

There are two reasons for this. First, it is likely that some proportion of the M/WBEs listed in the tables is not actually minority-owned or woman-owned. Second, it is likely that there are additional “unlisted” M/WBEs among all the businesses included in Tables 4.1-4.4. Such businesses do not appear in any of the directories we gathered and are therefore not included as M/WBEs in Tables 4.5-4.8. Additional steps are required to test these two conditions and to arrive at a more accurate representation of M/WBE availability within the Baseline Business Universe. We discuss these steps in Sections 3.A and 3.B below.

### 3. Verify Listed M/WBEs and Estimate Unlisted M/WBEs

It is likely that information on M/WBEs from *MarketPlace* and other M/WBE directories is not correct in all instances. Phenomena such as ownership changes, associate or mentor status, recording errors, or even outright misrepresentation could lead to businesses being listed as M/WBEs in a particular directory even though they are actually owned by non-minority males. Other things equal, this type of error would cause our availability estimate to be biased upward from the actual availability number.

The second likelihood that must be addressed is that not all M/WBE businesses are necessarily listed—either in *MarketPlace* or in any of the other directories we collected. Such phenomena as geographic relocation, ownership changes, directory compilation errors, and limitations in M/WBE outreach could all lead to M/WBEs being unlisted. Other things equal, this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. For this Study, we attempted to correct for the effect of these biases using statistical sampling procedures. We surveyed a large stratified random sample of 3,000 establishments drawn from the Baseline Business Universe and measured how often they were misclassified (or unclassified) by race and/or sex.<sup>128</sup>

Strata were defined according to NAICS sub-sectors code and listed M/WBE status.<sup>129</sup> In the phone survey, up to 10 attempts were made to reach each business and speak with an appropriate respondent. Attempts were scheduled for a mix of day and evening, weekdays and weekends, and appointments were scheduled for callbacks when necessary. Of the 3,000 firms in our sample, 1,419 were listed M/WBEs and 1,581 were unclassified by race or sex. However, 188 establishments were excluded as “unable to contact.” Exclusions resulted primarily from

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<sup>128</sup> A similar methodology has also been employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Surveys of Small Business Finances for 1993 and 1998. See Catherine Haggerty, Karen Grigorian, Rachel Harter and John D. Wolken. “The 1998 Survey of Small Business Finances: Sampling and Level of Effort Associated with Gaining Cooperation from Minority-Owned Business,” *Proceedings of the Second International Conference on Establishment Surveys*, Buffalo, NY, June 17-21, 2000.

<sup>129</sup> Six separate industry strata were created—three for Construction, one for CRS, one for other Services, and one for Commodities. All six strata were then split according to listed M/WBE status to create a total of 12 strata. Generally, listed M/WBEs were sampled at a higher rate than unclassified establishments.



establishments that were no longer in business.<sup>130</sup> Of the remaining 2,812 firms, 1,339 were listed M/WBEs and the remaining 1,473 establishments were unclassified.

The first part of the survey tested whether our sample of listed M/WBEs was correctly classified by race and/or sex. The second part of the survey tested whether the unclassified firms could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.

### **a. Survey of Listed M/WBEs**

We selected a stratified random sample of 1,419 listed M/WBEs to verify the race and gender status of their owner(s). Of these, 80 (5.6%) were excluded as “unable to contact.” Of the 1,339 remaining establishments, we obtained complete interviews from 600, for a response rate of 44.8 percent.<sup>131</sup>

Of the 600 establishments interviewed, 72 (12.0 percent) were owned by non-minority males. The amount of misclassification was substantial in every NAICS stratum, and was highest in NAICS 236 (Building Construction), as shown in Table 4.9. Misclassification varied by putative race and sex, and was highest among putative Native American firms and among putative M/WBE firms of unknown race and gender, as shown in Table 4.10.<sup>132</sup>

The race and gender status of the listed M/WBEs responding to the survey was changed, if necessary, according to the survey results. For example, if a business originally listed as a non-minority female-owned was actually non-minority male-owned, then that business was counted as non-minority male-owned for purposes of calculating M/WBE availability. But what about the remaining putatively non-minority female-owned establishments that we did not interview? For these businesses, we estimate the race and sex of their ownership based on the amount of misclassification we observed among the non-minority female-owned firms that we did interview. In this example, our interviews show that 74.5 percent of these firms are actually non-minority female-owned, 15.9 percent are actually non-minority male-owned, and 9.7 percent are actually minority-owned (see Table 4.10). Therefore, we assign each of the remaining putative non-minority female firms a 74.5 percent probability of actually being non-minority female-owned, a 15.9 percent probability of actually being non-minority male-owned, and a 9.7 percent probability of being minority-owned. We repeated this procedure within each sample stratum and for all putative race and sex categories.

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<sup>130</sup> A Fisher's Exact Test to check if putative M/WBEs were more likely to be affected by this than non-M/WBEs was not statistically significant.

<sup>131</sup> For this study, “Black” or “African American” refers to a person having origins in any of the Black racial groups of Africa; “Hispanic” refers to a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to a person having origins in any of the original peoples of the Far East, Southeast Asia, India, or the Pacific Islands; “Native American” refers to a person having origins in any of the original peoples of North and South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; and “White” or “non-minority” means a non-Hispanic person having origins in Europe, North Africa, or the Middle East.

<sup>132</sup> By “putative,” we mean the race and gender that we initially assigned to each firm based on the information provided by the City, by Dun & Bradstreet or by our master M/WBE directory.

### b. Survey of Unclassified Businesses

In a manner exactly analogous to our survey of listed M/WBEs, in the second part of our survey we examined unclassified businesses, *i.e.* any business that was not originally identified as a M/WBE, either in *MarketPlace* or in one or more of the other directories.

We selected a stratified random sample of 1,581 unclassified businesses from the Baseline Business Universe to verify the race and gender status of their owner(s). Of these, 108 (6.8%) were excluded as “unable to contact.” Of the 1,473 remaining establishments, we obtained 657 complete interviews, for a response rate of 44.6 percent.

Of the 657 establishments interviewed, 534 (81.3%) were owned by non-minority males, 68 (10.4%) by non-minority females, and 55 (8.4%) by minorities. A similar phenomenon was observed within each industry stratum, as shown in Table 4.11.

As with the survey of listed M/WBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For example, if an interviewed business that was originally unclassified indicated that it was actually non-minority male-owned, then that business was counted as non-minority male-owned for purposes of the M/WBE availability calculation. If it indicated it was non-minority female-owned, it was counted as non-minority female, and so on. For unclassified businesses that were not interviewed, we assigned probability values (probability actually non-minority male-owned, probability actually non-minority female-owned, probability actually African-American-owned, etc.) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

Clearly, a large majority of unclassified businesses in the Baseline Business Universe (81.3 percent overall) are non-minority male-owned. Nevertheless, this means that almost 19 percent were *not* non-minority male-owned. Among the latter, the largest group was non-minority female-owned, with descending size shares accounted for by African-American-owned, Asian-owned, Hispanic-owned, and finally Native American-owned. Table 4.12 shows the actual survey results by race and sex.

### B. Estimates of M/WBE Availability by Detailed Race, Sex, and Industry

Tables 4.13-4.16 present detailed estimates of M/WBE availability by race, sex, M/WBE status, and detailed NAICS industry. These estimates have been statistically corrected to adjust for misclassification and non-classification bias in the Baseline Business Universe as described in the previous section. Summary level estimates are weighted averages with weights based on industry-level contracting and procurement award dollars, as described in Chapter III, Section C.

Table 4.13 provides estimated M/WBE availability for all industries in the Construction procurement category during the study period. Overall, M/WBE availability in Construction is estimated at 32.37 percent.

Table 4.14 provides estimated M/WBE availability for all industries in the CRS procurement category during the study period. Overall, M/WBE availability in CRS is estimated at 44.93 percent.

Table 4.15 provides estimated M/WBE availability for all industries in the Services procurement category during the study period. Overall, M/WBE availability in Services is estimated at 40.11 percent.

Table 4.16 provides estimated M/WBE availability for all industries in the Commodities procurement category during the study period. Overall, M/WBE availability in Commodities is estimated at 30.54 percent.

Next, Table 4.17 shows that overall M/WBE availability in ARC's relevant marketplace is 34.64 percent. Non-M/WBE availability is 65.36 percent. Overall, among M/WBEs, availability of African-American-owned businesses is 14.26 percent, availability of Hispanic-owned businesses is 2.52 percent, availability of Asian-owned businesses is 1.87 percent, availability of Native American-owned businesses is 0.58 percent, and availability of non-minority female-owned businesses is 15.41 percent.

**C. Tables**
**Table 4.1. Construction—Number of Businesses and Industry Weight, by NAICS Code, 2009**

| <b>NAICS Code</b> | <b>NAICS Description</b>   | <b>Number of Estab-lishments</b> | <b>Industry Weight</b> | <b>Industry Weight (Cumulative)</b> |
|-------------------|--|----------------------------------|------------------------|-------------------------------------|
| 2362              | Nonresidential Building Construction   | 161                              | 39.37                  | 39.37                               |
| 2371              | Utility System Construction  | 39                               | 28.46                  | 67.82                               |
| 2382              | Building Equipment Contractors   | 499                              | 7.12                   | 74.94                               |
| 2373              | Highway, Street, and Bridge Construction                                       | 45                               | 5.48                   | 80.42                               |
| 2381              | Foundation, Structure, and Building Exterior Contractors                       | 203                              | 3.30                   | 83.72                               |
| 4236              | Electrical and Electronic Goods Merchant Wholesalers                           | 30                               | 2.34                   | 86.06                               |
| 2383              | Building Finishing Contractors   | 247                              | 1.92                   | 87.98                               |
| 5413              | Architectural, Engineering, and Related Services                               | 197                              | 1.90                   | 89.89                               |
| 2389              | Other Specialty Trade Contractors  | 31                               | 1.71                   | 91.60                               |
| 4235              | Metal and Mineral (except Petroleum) Merchant Wholesalers                      | 13                               | 1.51                   | 93.12                               |
| 5415              | Computer Systems Design and Related Services                                   | 211                              | 1.23                   | 94.34                               |
| 3333              | Commercial and Service Industry Machinery Manufacturing                        | 3                                | 0.95                   | 95.30                               |
| 5629              | Remediation and Other Waste Management Services                                | 43                               | 0.86                   | 96.16                               |
| 4237              | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 34                               | 0.64                   | 96.80                               |
| 4238              | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 148                              | 0.35                   | 97.16                               |
| 5416              | Management, Scientific, and Technical Consulting Services                      | 276                              | 0.35                   | 97.51                               |
| 4841              | General Freight Trucking   | 145                              | 0.28                   | 97.79                               |
| 2379              | Other Heavy and Civil Engineering Construction                                 | 5                                | 0.28                   | 98.07                               |
| 2123              | Nonmetallic Mineral Mining and Quarrying                                       | 4                                | 0.26                   | 98.33                               |
| 4233              | Lumber and Other Construction Materials Merchant Wholesalers                   | 74                               | 0.23                   | 98.55                               |
| 5617              | Services to Buildings and Dwellings  | 601                              | 0.22                   | 98.77                               |
| 3273              | Cement and Concrete Product Manufacturing                                      | 18                               | 0.18                   | 98.95                               |
| 3323              | Architectural and Structural Metals Manufacturing                              | 17                               | 0.12                   | 99.07                               |
| 3261              | Plastics Product Manufacturing   | 14                               | 0.11                   | 99.18                               |
| 4234              | Professional and Commercial Equipment and Supplies Merchant Wholesalers        | 37                               | 0.09                   | 99.28                               |
| 4421              | Furniture Stores   | 7                                | 0.08                   | 99.36                               |
| 4239              | Miscellaneous Durable Goods Merchant Wholesalers                               | 56                               | 0.07                   | 99.43                               |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description   | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|---|--------------------------|-----------------|------------------------------|
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing  | 12                       | 0.06            | 99.50                        |
| 4246       | Chemical and Allied Products Merchant Wholesalers   | 2                        | 0.06            | 99.56                        |
| 4539       | Other Miscellaneous Store Retailers   | 30                       | 0.06            | 99.62                        |
| 3219       | Other Wood Product Manufacturing  | 2                        | 0.05            | 99.67                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers                                     | 21                       | 0.05            | 99.72                        |
| 5611       | Office Administrative Services  | 107                      | 0.03            | 99.75                        |
| 5419       | Other Professional, Scientific, and Technical Services  | 13                       | 0.03            | 99.77                        |
| 8113       | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 35                       | 0.03            | 99.80                        |
| 3391       | Medical Equipment and Supplies Manufacturing  | 4                        | 0.02            | 99.82                        |
| 4241       | Paper and Paper Product Merchant Wholesalers  | 13                       | 0.02            | 99.85                        |
| 5616       | Investigation and Security Services   | 38                       | 0.02            | 99.87                        |
| 5171       | Wired Telecommunications Carriers   | 28                       | 0.02            | 99.88                        |
| 4442       | Lawn and Garden Equipment and Supplies Stores   | 4                        | 0.01            | 99.90                        |
| 3371       | Household and Institutional Furniture and Kitchen Cabinet Manufacturing                                     | 2                        | 0.01            | 99.91                        |
| 4247       | Petroleum and Petroleum Products Merchant Wholesalers   | 14                       | 0.01            | 99.92                        |
| 3132       | Fabric Mills  | 8                        | 0.01            | 99.94                        |
| 3339       | Other General Purpose Machinery Manufacturing   | 4                        | 0.01            | 99.95                        |
| 5242       | Agencies, Brokerages, and Other Insurance Related Activities  | 268                      | 0.01            | 99.96                        |
| 3271       | Clay Product and Refractory Manufacturing   | 2                        | 0.01            | 99.97                        |
| 5613       | Employment Services   | 82                       | 0.01            | 99.97                        |
| 2372       | Land Subdivision  | 57                       | 0.01            | 99.98                        |
| 3364       | Aerospace Product and Parts Manufacturing   | 3                        | 0.00            | 99.98                        |
| 4543       | Direct Selling Establishments   | 9                        | 0.00            | 99.99                        |
| 3259       | Other Chemical Product and Preparation Manufacturing  | 5                        | 0.00            | 99.99                        |
| 4921       | Couriers and Express Delivery Services  | 1                        | 0.00            | 100.00                       |
| 3351       | Electric Lighting Equipment Manufacturing   | 1                        | 0.00            | 100.00                       |
| 3149       | Other Textile Product Mills   | 15                       | 0.00            | 100.00                       |
| 4532       | Office Supplies, Stationery, and Gift Stores  | 150                      | 0.00            | 100.00                       |
| 5614       | Business Support Services   | 2                        | 0.00            | 100.00                       |
| 7222       | Limited-Service Eating Places   | 5                        | 0.00            | 100.00                       |
| 4483       | Jewelry, Luggage, and Leather Goods Stores  | 6                        | 0.00            | 100.00                       |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description                                   | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|---|--------------------------|-----------------|------------------------------|
| 5313       | Activities Related to Real Estate                   | 49                       | 0.00            | 100.00                       |
| 4531       | Florists  | 65                       | 0.00            | 100.00                       |
| 8123       | Drycleaning and Laundry Services                    | 1                        | 0.00            | 100.00                       |
| 3372       | Office Furniture (including Fixtures) Manufacturing | 3                        | 0.00            | 100.00                       |
|            | <i>TOTAL</i>  | <i>4,219</i>             |                 |                              |

Source: Dun & Bradstreet's *MarketPlace*; M/WBE business directory information compiled by NERA; Master Contract/Subcontract Database.

**Table 4.2. CRS—Number of Businesses and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 5413       | Architectural, Engineering, and Related Services                               | 238                      | 89.21           | 89.21                        |
| 2382       | Building Equipment Contractors   | 306                      | 6.39            | 95.60                        |
| 5629       | Remediation and Other Waste Management Services                                | 24                       | 2.08            | 97.68                        |
| 5415       | Computer Systems Design and Related Services                                   | 93                       | 0.60            | 98.28                        |
| 5242       | Agencies, Brokerages, and Other Insurance Related Activities                   | 268                      | 0.41            | 98.69                        |
| 5616       | Investigation and Security Services  | 2                        | 0.36            | 99.05                        |
| 5417       | Scientific Research and Development Services                                   | 32                       | 0.35            | 99.40                        |
| 5416       | Management, Scientific, and Technical Consulting Services                      | 52                       | 0.20            | 99.60                        |
| 4236       | Electrical and Electronic Goods Merchant Wholesalers                           | 30                       | 0.17            | 99.77                        |
| 5617       | Services to Buildings and Dwellings  | 277                      | 0.10            | 99.87                        |
| 7222       | Limited-Service Eating Places  | 5                        | 0.07            | 99.94                        |
| 5614       | Business Support Services  | 2                        | 0.05            | 99.98                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 15                       | 0.02            | 100.00                       |
|            | <i>TOTAL</i>   | <i>1,344</i>             |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.3. Services—Number of Businesses and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 5413       | Architectural, Engineering, and Related Services                               | 238                      | 40.32           | 40.32                        |
| 5411       | Legal Services   | 334                      | 11.93           | 52.26                        |
| 5112       | Software Publishers  | 18                       | 9.52            | 61.77                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers        | 21                       | 8.43            | 70.21                        |
| 2382       | Building Equipment Contractors   | 499                      | 3.58            | 73.78                        |
| 5415       | Computer Systems Design and Related Services                                   | 118                      | 3.52            | 77.31                        |
| 5416       | Management, Scientific, and Technical Consulting Services                      | 276                      | 3.39            | 80.70                        |
| 3331       | Agriculture, Construction, and Mining Machinery Manufacturing                  | 5                        | 3.35            | 84.05                        |
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing           | 12                       | 3.00            | 87.05                        |
| 3343       | Audio and Video Equipment Manufacturing  | 2                        | 1.93            | 88.98                        |
| 2362       | Nonresidential Building Construction   | 102                      | 1.93            | 90.91                        |
| 5614       | Business Support Services  | 39                       | 1.46            | 92.36                        |
| 5629       | Remediation and Other Waste Management Services                                | 32                       | 1.22            | 93.59                        |
| 4238       | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 102                      | 1.08            | 94.67                        |
| 5418       | Advertising, Public Relations, and Related Services                            | 74                       | 0.95            | 95.61                        |
| 5171       | Wired Telecommunications Carriers  | 28                       | 0.78            | 96.39                        |
| 5182       | Data Processing, Hosting, and Related Services                                 | 19                       | 0.74            | 97.14                        |
| 2371       | Utility System Construction  | 39                       | 0.74            | 97.88                        |
| 4431       | Electronics and Appliance Stores   | 23                       | 0.51            | 98.39                        |
| 5616       | Investigation and Security Services  | 61                       | 0.42            | 98.81                        |
| 2381       | Foundation, Structure, and Building Exterior Contractors                       | 107                      | 0.31            | 99.12                        |
| 5617       | Services to Buildings and Dwellings  | 277                      | 0.31            | 99.43                        |
| 3341       | Computer and Peripheral Equipment Manufacturing                                | 4                        | 0.21            | 99.64                        |
| 5417       | Scientific Research and Development Services                                   | 40                       | 0.11            | 99.75                        |
| 3149       | Other Textile Product Mills  | 2                        | 0.08            | 99.83                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 11                       | 0.07            | 99.90                        |
| 2389       | Other Specialty Trade Contractors  | 31                       | 0.05            | 99.95                        |
| 2383       | Building Finishing Contractors   | 196                      | 0.04            | 99.99                        |
| 4239       | Miscellaneous Durable Goods Merchant Wholesalers                               | 56                       | 0.01            | 100.00                       |



## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 4841       | General Freight Trucking   | 102                      | 0.00            | 100.00                       |
| 3345       | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 5                        | 0.00            | 100.00                       |
|            | <i>TOTAL</i>   | <i>2,873</i>             |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.4. Commodities—Number of Businesses and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 4247       | Petroleum and Petroleum Products Merchant Wholesalers                          | 14                       | 35.06           | 35.06                        |
| 4411       | Automobile Dealers   | 83                       | 11.92           | 46.98                        |
| 4238       | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 166                      | 10.07           | 57.05                        |
| 2373       | Highway, Street, and Bridge Construction                                       | 45                       | 6.77            | 63.82                        |
| 3342       | Communications Equipment Manufacturing   | 5                        | 6.17            | 69.99                        |
| 4234       | Professional and Commercial Equipment and Supplies Merchant Wholesalers        | 58                       | 4.62            | 74.61                        |
| 4431       | Electronics and Appliance Stores   | 28                       | 4.01            | 78.63                        |
| 4236       | Electrical and Electronic Goods Merchant Wholesalers                           | 30                       | 2.33            | 80.95                        |
| 3345       | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 11                       | 2.24            | 83.20                        |
| 5415       | Computer Systems Design and Related Services                                   | 211                      | 2.16            | 85.36                        |
| 4243       | Apparel, Piece Goods, and Notions Merchant Wholesalers                         | 6                        | 1.88            | 87.23                        |
| 4244       | Grocery and Related Product Merchant Wholesalers                               | 25                       | 1.71            | 88.94                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers        | 21                       | 1.55            | 90.49                        |
| 4246       | Chemical and Allied Products Merchant Wholesalers                              | 30                       | 1.27            | 91.77                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 34                       | 1.25            | 93.02                        |
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing           | 12                       | 0.94            | 93.96                        |
| 4412       | Other Motor Vehicle Dealers  | 45                       | 0.76            | 94.73                        |
| 2382       | Building Equipment Contractors   | 499                      | 0.55            | 95.28                        |
| 4239       | Miscellaneous Durable Goods Merchant Wholesalers                               | 71                       | 0.50            | 95.78                        |
| 5629       | Remediation and Other Waste Management Services                                | 43                       | 0.48            | 96.27                        |
| 2381       | Foundation, Structure, and Building Exterior Contractors                       | 40                       | 0.39            | 96.66                        |
| 4249       | Miscellaneous Nondurable Goods Merchant Wholesalers                            | 19                       | 0.39            | 97.05                        |
| 4235       | Metal and Mineral (except Petroleum) Merchant Wholesalers                      | 13                       | 0.34            | 97.39                        |
| 4511       | Sporting Goods, Hobby, and Musical Instrument Stores                           | 90                       | 0.33            | 97.72                        |
| 5112       | Software Publishers  | 18                       | 0.26            | 97.98                        |
| 2123       | Nonmetallic Mineral Mining and Quarrying                                       | 4                        | 0.25            | 98.23                        |
| 3231       | Printing and Related Support Activities  | 20                       | 0.24            | 98.47                        |
| 6219       | Other Ambulatory Health Care Services  | 17                       | 0.21            | 98.69                        |
| 5111       | Newspaper, Periodical, Book, and Directory Publishers                          | 11                       | 0.21            | 98.89                        |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 3252       | Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing | 5                        | 0.15            | 99.04                        |
| 3399       | Other Miscellaneous Manufacturing  | 49                       | 0.14            | 99.19                        |
| 3329       | Other Fabricated Metal Product Manufacturing   | 3                        | 0.11            | 99.30                        |
| 2371       | Utility System Construction  | 39                       | 0.09            | 99.39                        |
| 5413       | Architectural, Engineering, and Related Services                                     | 20                       | 0.07            | 99.46                        |
| 3391       | Medical Equipment and Supplies Manufacturing   | 4                        | 0.07            | 99.53                        |
| 3341       | Computer and Peripheral Equipment Manufacturing                                      | 4                        | 0.07            | 99.60                        |
| 3333       | Commercial and Service Industry Machinery Manufacturing                              | 3                        | 0.07            | 99.67                        |
| 3222       | Converted Paper Product Manufacturing  | 1                        | 0.04            | 99.71                        |
| 5416       | Management, Scientific, and Technical Consulting Services                            | 52                       | 0.04            | 99.75                        |
| 5617       | Services to Buildings and Dwellings  | 277                      | 0.03            | 99.78                        |
| 4233       | Lumber and Other Construction Materials Merchant Wholesalers                         | 35                       | 0.03            | 99.80                        |
| 4532       | Office Supplies, Stationery, and Gift Stores   | 16                       | 0.03            | 99.83                        |
| 5172       | Wireless Telecommunications Carriers (except Satellite)                              | 41                       | 0.03            | 99.86                        |
| 3344       | Semiconductor and Other Electronic Component Manufacturing                           | 4                        | 0.02            | 99.88                        |
| 4841       | General Freight Trucking   | 145                      | 0.02            | 99.91                        |
| 5171       | Wired Telecommunications Carriers  | 28                       | 0.02            | 99.93                        |
| 8112       | Electronic and Precision Equipment Repair and Maintenance                            | 49                       | 0.02            | 99.95                        |
| 3364       | Aerospace Product and Parts Manufacturing  | 3                        | 0.02            | 99.97                        |
| 2383       | Building Finishing Contractors   | 52                       | 0.02            | 99.98                        |
| 8123       | Drycleaning and Laundry Services   | 1                        | 0.02            | 100.00                       |
|            | <i>TOTAL</i>   | <i>2,500</i>             |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.5. Construction—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 2362       | Nonresidential Building Construction   | 50                       | 39.37           | 39.37                        |
| 2371       | Utility System Construction  | 4                        | 28.46           | 67.82                        |
| 2382       | Building Equipment Contractors   | 73                       | 7.12            | 74.94                        |
| 2373       | Highway, Street, and Bridge Construction                                       | 7                        | 5.48            | 80.42                        |
| 2381       | Foundation, Structure, and Building Exterior Contractors                       | 26                       | 3.30            | 83.72                        |
| 4236       | Electrical and Electronic Goods Merchant Wholesalers                           | 1                        | 2.34            | 86.06                        |
| 2383       | Building Finishing Contractors   | 22                       | 1.92            | 87.98                        |
| 5413       | Architectural, Engineering, and Related Services                               | 73                       | 1.90            | 89.89                        |
| 2389       | Other Specialty Trade Contractors  | 7                        | 1.71            | 91.60                        |
| 4235       | Metal and Mineral (except Petroleum) Merchant Wholesalers                      | 2                        | 1.51            | 93.12                        |
| 5415       | Computer Systems Design and Related Services                                   | 122                      | 1.23            | 94.34                        |
| 3333       | Commercial and Service Industry Machinery Manufacturing                        | 2                        | 0.95            | 95.30                        |
| 5629       | Remediation and Other Waste Management Services                                | 9                        | 0.86            | 96.16                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 5                        | 0.64            | 96.80                        |
| 4238       | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 18                       | 0.35            | 97.16                        |
| 5416       | Management, Scientific, and Technical Consulting Services                      | 118                      | 0.35            | 97.51                        |
| 4841       | General Freight Trucking   | 32                       | 0.28            | 97.79                        |
| 2379       | Other Heavy and Civil Engineering Construction                                 | 3                        | 0.28            | 98.07                        |
| 2123       | Nonmetallic Mineral Mining and Quarrying                                       | 0                        | 0.26            | 98.33                        |
| 4233       | Lumber and Other Construction Materials Merchant Wholesalers                   | 1                        | 0.23            | 98.55                        |
| 5617       | Services to Buildings and Dwellings  | 131                      | 0.22            | 98.77                        |
| 3273       | Cement and Concrete Product Manufacturing                                      | 1                        | 0.18            | 98.95                        |
| 3323       | Architectural and Structural Metals Manufacturing                              | 4                        | 0.12            | 99.07                        |
| 3261       | Plastics Product Manufacturing   | 5                        | 0.11            | 99.18                        |
| 4234       | Professional and Commercial Equipment and Supplies Merchant Wholesalers        | 9                        | 0.09            | 99.28                        |
| 4421       | Furniture Stores   | 4                        | 0.08            | 99.36                        |
| 4239       | Miscellaneous Durable Goods Merchant Wholesalers                               | 9                        | 0.07            | 99.43                        |
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing           | 1                        | 0.06            | 99.50                        |
| 4246       | Chemical and Allied Products Merchant Wholesalers                              | 0                        | 0.06            | 99.56                        |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description   | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|---|--------------------------|-----------------|------------------------------|
| 4539       | Other Miscellaneous Store Retailers   | 13                       | 0.06            | 99.62                        |
| 3219       | Other Wood Product Manufacturing  | 1                        | 0.05            | 99.67                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers                                     | 2                        | 0.05            | 99.72                        |
| 5611       | Office Administrative Services  | 18                       | 0.03            | 99.75                        |
| 5419       | Other Professional, Scientific, and Technical Services  | 5                        | 0.03            | 99.77                        |
| 8113       | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 5                        | 0.03            | 99.80                        |
| 3391       | Medical Equipment and Supplies Manufacturing  | 2                        | 0.02            | 99.82                        |
| 4241       | Paper and Paper Product Merchant Wholesalers  | 2                        | 0.02            | 99.85                        |
| 5616       | Investigation and Security Services   | 7                        | 0.02            | 99.87                        |
| 5171       | Wired Telecommunications Carriers   | 13                       | 0.02            | 99.88                        |
| 4442       | Lawn and Garden Equipment and Supplies Stores   | 1                        | 0.01            | 99.90                        |
| 3371       | Household and Institutional Furniture and Kitchen Cabinet Manufacturing                                     | 1                        | 0.01            | 99.91                        |
| 4247       | Petroleum and Petroleum Products Merchant Wholesalers   | 1                        | 0.01            | 99.92                        |
| 3132       | Fabric Mills  | 0                        | 0.01            | 99.94                        |
| 3339       | Other General Purpose Machinery Manufacturing   | 1                        | 0.01            | 99.95                        |
| 5242       | Agencies, Brokerages, and Other Insurance Related Activities  | 28                       | 0.01            | 99.96                        |
| 3271       | Clay Product and Refractory Manufacturing   | 0                        | 0.01            | 99.97                        |
| 5613       | Employment Services   | 37                       | 0.01            | 99.97                        |
| 2372       | Land Subdivision  | 6                        | 0.01            | 99.98                        |
| 3364       | Aerospace Product and Parts Manufacturing   | 0                        | 0.00            | 99.98                        |
| 4543       | Direct Selling Establishments   | 0                        | 0.00            | 99.99                        |
| 3259       | Other Chemical Product and Preparation Manufacturing  | 4                        | 0.00            | 99.99                        |
| 4921       | Couriers and Express Delivery Services  | 0                        | 0.00            | 100.00                       |
| 3351       | Electric Lighting Equipment Manufacturing   | 0                        | 0.00            | 100.00                       |
| 3149       | Other Textile Product Mills   | 4                        | 0.00            | 100.00                       |
| 4532       | Office Supplies, Stationery, and Gift Stores  | 47                       | 0.00            | 100.00                       |
| 5614       | Business Support Services   | 1                        | 0.00            | 100.00                       |
| 7222       | Limited-Service Eating Places   | 2                        | 0.00            | 100.00                       |
| 4483       | Jewelry, Luggage, and Leather Goods Stores  | 0                        | 0.00            | 100.00                       |
| 5313       | Activities Related to Real Estate   | 12                       | 0.00            | 100.00                       |
| 4531       | Florists  | 26                       | 0.00            | 100.00                       |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description                                   | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|---|--------------------------|-----------------|------------------------------|
| 8123       | Drycleaning and Laundry Services                    | 0                        | 0.00            | 100.00                       |
| 3372       | Office Furniture (including Fixtures) Manufacturing | 2                        | 0.00            | 100.00                       |
|            | <i>TOTAL</i>  | <i>980</i>               |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.6. CRS—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 5413       | Architectural, Engineering, and Related Services                               | 94                       | 89.21           | 89.21                        |
| 2382       | Building Equipment Contractors   | 27                       | 6.39            | 95.60                        |
| 5629       | Remediation and Other Waste Management Services                                | 5                        | 2.08            | 97.68                        |
| 5415       | Computer Systems Design and Related Services                                   | 37                       | 0.60            | 98.28                        |
| 5242       | Agencies, Brokerages, and Other Insurance Related Activities                   | 28                       | 0.41            | 98.69                        |
| 5616       | Investigation and Security Services  | 1                        | 0.36            | 99.05                        |
| 5417       | Scientific Research and Development Services                                   | 12                       | 0.35            | 99.40                        |
| 5416       | Management, Scientific, and Technical Consulting Services                      | 9                        | 0.20            | 99.60                        |
| 4236       | Electrical and Electronic Goods Merchant Wholesalers                           | 1                        | 0.17            | 99.77                        |
| 5617       | Services to Buildings and Dwellings  | 35                       | 0.10            | 99.87                        |
| 7222       | Limited-Service Eating Places  | 2                        | 0.07            | 99.94                        |
| 5614       | Business Support Services  | 1                        | 0.05            | 99.98                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 0                        | 0.02            | 100.00                       |
|            | <i>TOTAL</i>   | <i>252</i>               |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.7. Services—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 5413       | Architectural, Engineering, and Related Services                               | 94                       | 40.32           | 40.32                        |
| 5411       | Legal Services   | 27                       | 11.93           | 52.26                        |
| 5112       | Software Publishers  | 14                       | 9.52            | 61.77                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers        | 2                        | 8.43            | 70.21                        |
| 2382       | Building Equipment Contractors   | 73                       | 3.58            | 73.78                        |
| 5415       | Computer Systems Design and Related Services                                   | 85                       | 3.52            | 77.31                        |
| 5416       | Management, Scientific, and Technical Consulting Services                      | 118                      | 3.39            | 80.70                        |
| 3331       | Agriculture, Construction, and Mining Machinery Manufacturing                  | 2                        | 3.35            | 84.05                        |
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing           | 1                        | 3.00            | 87.05                        |
| 3343       | Audio and Video Equipment Manufacturing  | 1                        | 1.93            | 88.98                        |
| 2362       | Nonresidential Building Construction   | 37                       | 1.93            | 90.91                        |
| 5614       | Business Support Services  | 35                       | 1.46            | 92.36                        |
| 5629       | Remediation and Other Waste Management Services                                | 9                        | 1.22            | 93.59                        |
| 4238       | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 9                        | 1.08            | 94.67                        |
| 5418       | Advertising, Public Relations, and Related Services                            | 15                       | 0.95            | 95.61                        |
| 5171       | Wired Telecommunications Carriers  | 13                       | 0.78            | 96.39                        |
| 5182       | Data Processing, Hosting, and Related Services                                 | 19                       | 0.74            | 97.14                        |
| 2371       | Utility System Construction  | 4                        | 0.74            | 97.88                        |
| 4431       | Electronics and Appliance Stores   | 16                       | 0.51            | 98.39                        |
| 5616       | Investigation and Security Services  | 18                       | 0.42            | 98.81                        |
| 2381       | Foundation, Structure, and Building Exterior Contractors                       | 11                       | 0.31            | 99.12                        |
| 5617       | Services to Buildings and Dwellings  | 35                       | 0.31            | 99.43                        |
| 3341       | Computer and Peripheral Equipment Manufacturing                                | 4                        | 0.21            | 99.64                        |
| 5417       | Scientific Research and Development Services                                   | 19                       | 0.11            | 99.75                        |
| 3149       | Other Textile Product Mills  | 1                        | 0.08            | 99.83                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 0                        | 0.07            | 99.90                        |
| 2389       | Other Specialty Trade Contractors  | 7                        | 0.05            | 99.95                        |
| 2383       | Building Finishing Contractors   | 21                       | 0.04            | 99.99                        |
| 4239       | Miscellaneous Durable Goods Merchant Wholesalers                               | 9                        | 0.01            | 100.00                       |



## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 4841       | General Freight Trucking   | 19                       | 0.00            | 100.00                       |
| 3345       | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 3                        | 0.00            | 100.00                       |
|            | <i>TOTAL</i>   | <i>721</i>               |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.8. Commodities—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2009**

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 4247       | Petroleum and Petroleum Products Merchant Wholesalers                          | 1                        | 35.06           | 35.06                        |
| 4411       | Automobile Dealers   | 4                        | 11.92           | 46.98                        |
| 4238       | Machinery, Equipment, and Supplies Merchant Wholesalers                        | 22                       | 10.07           | 57.05                        |
| 2373       | Highway, Street, and Bridge Construction                                       | 7                        | 6.77            | 63.82                        |
| 3342       | Communications Equipment Manufacturing   | 5                        | 6.17            | 69.99                        |
| 4234       | Professional and Commercial Equipment and Supplies Merchant Wholesalers        | 14                       | 4.62            | 74.61                        |
| 4431       | Electronics and Appliance Stores   | 16                       | 4.01            | 78.63                        |
| 4236       | Electrical and Electronic Goods Merchant Wholesalers                           | 1                        | 2.33            | 80.95                        |
| 3345       | Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 2                        | 2.24            | 83.20                        |
| 5415       | Computer Systems Design and Related Services                                   | 122                      | 2.16            | 85.36                        |
| 4243       | Apparel, Piece Goods, and Notions Merchant Wholesalers                         | 3                        | 1.88            | 87.23                        |
| 4244       | Grocery and Related Product Merchant Wholesalers                               | 3                        | 1.71            | 88.94                        |
| 4231       | Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers        | 2                        | 1.55            | 90.49                        |
| 4246       | Chemical and Allied Products Merchant Wholesalers                              | 4                        | 1.27            | 91.77                        |
| 4237       | Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers | 5                        | 1.25            | 93.02                        |
| 5324       | Commercial and Industrial Machinery and Equipment Rental and Leasing           | 1                        | 0.94            | 93.96                        |
| 4412       | Other Motor Vehicle Dealers  | 1                        | 0.76            | 94.73                        |
| 2382       | Building Equipment Contractors   | 73                       | 0.55            | 95.28                        |
| 4239       | Miscellaneous Durable Goods Merchant Wholesalers                               | 12                       | 0.50            | 95.78                        |
| 5629       | Remediation and Other Waste Management Services                                | 9                        | 0.48            | 96.27                        |
| 2381       | Foundation, Structure, and Building Exterior Contractors                       | 8                        | 0.39            | 96.66                        |
| 4249       | Miscellaneous Nondurable Goods Merchant Wholesalers                            | 1                        | 0.39            | 97.05                        |
| 4235       | Metal and Mineral (except Petroleum) Merchant Wholesalers                      | 2                        | 0.34            | 97.39                        |
| 4511       | Sporting Goods, Hobby, and Musical Instrument Stores                           | 8                        | 0.33            | 97.72                        |
| 5112       | Software Publishers  | 14                       | 0.26            | 97.98                        |
| 2123       | Nonmetallic Mineral Mining and Quarrying                                       | 0                        | 0.25            | 98.23                        |
| 3231       | Printing and Related Support Activities  | 6                        | 0.24            | 98.47                        |
| 6219       | Other Ambulatory Health Care Services  | 0                        | 0.21            | 98.69                        |
| 5111       | Newspaper, Periodical, Book, and Directory Publishers                          | 2                        | 0.21            | 98.89                        |

## M/WBE Availability in Augusta's Marketplace

| NAICS Code | NAICS Description  | Number of Establishments | Industry Weight | Industry Weight (Cumulative) |
|------------|--|--------------------------|-----------------|------------------------------|
| 3252       | Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing | 0                        | 0.15            | 99.04                        |
| 3399       | Other Miscellaneous Manufacturing  | 16                       | 0.14            | 99.19                        |
| 3329       | Other Fabricated Metal Product Manufacturing   | 1                        | 0.11            | 99.30                        |
| 2371       | Utility System Construction  | 4                        | 0.09            | 99.39                        |
| 5413       | Architectural, Engineering, and Related Services                                     | 4                        | 0.07            | 99.46                        |
| 3391       | Medical Equipment and Supplies Manufacturing   | 2                        | 0.07            | 99.53                        |
| 3341       | Computer and Peripheral Equipment Manufacturing                                      | 4                        | 0.07            | 99.60                        |
| 3333       | Commercial and Service Industry Machinery Manufacturing                              | 2                        | 0.07            | 99.67                        |
| 3222       | Converted Paper Product Manufacturing  | 1                        | 0.04            | 99.71                        |
| 5416       | Management, Scientific, and Technical Consulting Services                            | 9                        | 0.04            | 99.75                        |
| 5617       | Services to Buildings and Dwellings  | 35                       | 0.03            | 99.78                        |
| 4233       | Lumber and Other Construction Materials Merchant Wholesalers                         | 1                        | 0.03            | 99.80                        |
| 4532       | Office Supplies, Stationery, and Gift Stores   | 7                        | 0.03            | 99.83                        |
| 5172       | Wireless Telecommunications Carriers (except Satellite)                              | 9                        | 0.03            | 99.86                        |
| 3344       | Semiconductor and Other Electronic Component Manufacturing                           | 1                        | 0.02            | 99.88                        |
| 4841       | General Freight Trucking   | 32                       | 0.02            | 99.91                        |
| 5171       | Wired Telecommunications Carriers  | 13                       | 0.02            | 99.93                        |
| 8112       | Electronic and Precision Equipment Repair and Maintenance                            | 8                        | 0.02            | 99.95                        |
| 3364       | Aerospace Product and Parts Manufacturing  | 0                        | 0.02            | 99.97                        |
| 2383       | Building Finishing Contractors   | 9                        | 0.02            | 99.98                        |
| 8123       | Drycleaning and Laundry Services   | 0                        | 0.02            | 100.00                       |
|            | <i>TOTAL</i>   | <i>506</i>               |                 |                              |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.9. Listed M/WBE Survey—Amount of Misclassification, by NAICS Code Grouping**

| <b>Listed M/WBE By<br/>NAICS Code<br/>Grouping</b> | <b>Misclassification<br/>(Percentage non-<br/>minority male)</b> | <b>Percentage Actually<br/>M/WBE-owned</b> | <b>Number of<br/>Businesses<br/>Interviewed</b> |
|--|--|--|---|
| NAICS 236  | 30.8   | 69.2                                       | 13  |
| NAICS 237  | 0.0  | 100.0                                      | 8   |
| NAICS 238  | 21.0   | 79.0                                       | 81  |
| NAICS 5413   | 6.3  | 93.7                                       | 143   |
| Other Services                                     | 15.3   | 84.7                                       | 150   |
| Commodities  | 9.3  | 90.7                                       | 205   |
| All NAICS Codes                                    | 12.0   | 88.0                                       | 600   |

Source: NERA telephone surveys, 2009.

Note: NAICS 236 – Building Construction, NAICS 237 – Heavy Construction, NAICS 238 – Special Trades Construction, NAICS 5413 – Architecture, Engineering & Related Services.

**Table 4.10. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type**

| <b>Putative Race/Sex</b>      | <b>Misclassification<br/>(Percentage non-minority male)</b> | <b>Misclassification<br/>(Percentage Other M/WBE Type)</b> | <b>Percentage Correctly Classified</b> | <b>Number of Businesses Interviewed</b> |
|-------------------------------|---|--|--|---|
| African-American (either sex) | 1.4   | 3.8  | 94.8                                   | 210                                     |
| Hispanic (either sex)         | 17.9  | 14.3   | 67.9                                   | 28                                      |
| Asian (either sex)            | 17.8  | 6.7  | 75.6                                   | 45                                      |
| Native American (either sex)  | 40.0  | 20.0   | 40.0                                   | 25                                      |
| Non-minority Female           | 15.9  | 9.7  | 74.5                                   | 290                                     |
| Unknown                       | 0.0   | 100.0  | 0.0                                    | 2                                       |
| All M/WBE Types               | 12.00   | 8.3  | 79.7                                   | 600                                     |

Source and Notes: See Table 4.9.

## M/WBE Availability in Augusta's Marketplace

**Table 4.11. Unclassified Businesses Survey —By NAICS Code Grouping**

| <b>Listed M/WBE By<br/>SIC Code Grouping</b> | <b>Percentage Actually<br/>non-minority male-<br/>owned</b> | <b>Percentage M/WBE</b> | <b>Number of<br/>Businesses<br/>Interviewed</b> |
|--|---|-------------------------|---|
| NAICS 236                                    | 84.8  | 15.2                    | 59  |
| NAICS 237                                    | 78.7  | 21.3                    | 47  |
| NAICS 238                                    | 85.7  | 14.3                    | 140   |
| NAICS 5413                                   | 78.5  | 21.5                    | 116   |
| Commodities                                  | 78.7  | 21.3                    | 136   |
| Other Services                               | 81.1  | 18.9                    | 159   |
| All NAICS Codes                              | 81.3  | 18.7                    | 657   |

Source and Notes: See Table 4.9.

**Table 4.12. Unclassified Businesses Survey—By Race and Sex**

| Verified Race/Sex             | Number of Businesses<br>Interviewed | Percentage of Total |
|-------------------------------|-------------------------------------|---------------------|
| Non-minority male             | 534                                 | 81.3                |
| Non-minority Female           | 68                                  | 10.4                |
| African-American (either sex) | 36                                  | 5.5                 |
| Hispanic (either sex)         | 5                                   | 0.8                 |
| Asian (either sex)            | 10                                  | 1.5                 |
| Native American (either sex)  | 4                                   | 0.6                 |
| TOTAL                         | 657                                 | 100.0               |

Source and Notes: See Table 4.9.

## M/WBE Availability in Augusta's Marketplace

**Table 4.13. Detailed M/WBE Availability—Construction, 2009**

| Detailed Industry   | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Nonresidential Building Construction (NAICS 2362)   | 20.32            | 3.99     | 0.05  | 0.45            | 11.55               | 36.37 | 63.63     |
| Utility System Construction (NAICS 2371)  | 5.14             | 0.46     | 0.04  | 0.33            | 17.08               | 23.04 | 76.96     |
| Building Equipment Contractors (NAICS 2382)   | 11.67            | 1.83     | 1.29  | 1.25            | 10.09               | 26.13 | 73.87     |
| Highway, Street, and Bridge Construction (NAICS 2373)                                       | 10.02            | 0.00     | 0.00  | 0.00            | 27.99               | 38.01 | 61.99     |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)                       | 10.81            | 1.12     | 0.00  | 0.76            | 11.74               | 24.42 | 75.58     |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 1.09             | 0.55     | 2.18  | 0.00            | 19.20               | 23.02 | 76.98     |
| Building Finishing Contractors (NAICS 2383)   | 8.35             | 1.57     | 0.65  | 1.14            | 6.55                | 18.25 | 81.75     |
| Architectural, Engineering, and Related Services (NAICS 5413)                               | 11.43            | 2.81     | 6.24  | 0.62            | 28.34               | 49.44 | 50.56     |
| Other Specialty Trade Contractors (NAICS 2389)  | 9.38             | 1.26     | 2.63  | 0.95            | 15.25               | 29.47 | 70.53     |
| Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)                      | 1.05             | 0.48     | 2.19  | 0.25            | 24.51               | 28.48 | 71.52     |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 33.56            | 0.89     | 4.30  | 0.54            | 17.33               | 56.62 | 43.38     |
| Commercial and Service Industry Machinery Manufacturing (NAICS 3333)                        | 30.18            | 33.54    | 0.84  | 0.00            | 8.39                | 72.96 | 27.04     |
| Remediation and Other Waste Management Services (NAICS 5629)                                | 15.19            | 0.25     | 0.69  | 0.79            | 24.19               | 41.11 | 58.89     |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.91             | 0.35     | 2.02  | 0.63            | 27.70               | 31.61 | 68.39     |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                        | 4.40             | 1.48     | 2.42  | 0.05            | 15.45               | 23.78 | 76.22     |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)                      | 10.32            | 3.18     | 6.22  | 0.65            | 15.56               | 35.92 | 64.08     |
| General Freight Trucking (NAICS 4841)   | 17.95            | 0.60     | 1.24  | 0.68            | 16.13               | 36.60 | 63.40     |
| Other Heavy and Civil Engineering Construction (NAICS 2379)                                 | 40.85            | 0.00     | 0.00  | 20.00           | 7.66                | 68.51 | 31.49     |



## M/WBE Availability in Augusta's Marketplace

| Detailed Industry  | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Nonmetallic Mineral Mining and Quarrying (NAICS 2123)  | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)                            | 1.06             | 0.53     | 2.12  | 0.00            | 13.40               | 17.11 | 82.89     |
| Services to Buildings and Dwellings (NAICS 5617)   | 15.03            | 0.19     | 1.38  | 0.72            | 14.07               | 31.39 | 68.61     |
| Cement and Concrete Product Manufacturing (NAICS 3273)   | 6.13             | 0.52     | 2.09  | 0.00            | 12.60               | 21.34 | 78.66     |
| Architectural and Structural Metals Manufacturing (NAICS 3323)                                       | 1.01             | 0.44     | 2.16  | 0.39            | 31.03               | 35.03 | 64.97     |
| Plastics Product Manufacturing (NAICS 3261)  | 7.41             | 0.36     | 2.37  | 0.93            | 30.15               | 41.22 | 58.78     |
| Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)                 | 2.51             | 0.52     | 2.09  | 0.01            | 17.82               | 22.96 | 77.04     |
| Furniture Stores (NAICS 4421)  | 2.98             | 0.39     | 2.07  | 1.25            | 51.72               | 58.41 | 41.59     |
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)  | 4.52             | 0.47     | 2.18  | 0.29            | 21.07               | 28.53 | 71.47     |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)                    | 8.70             | 0.12     | 1.47  | 0.80            | 15.69               | 26.78 | 73.22     |
| Chemical and Allied Products Merchant Wholesalers (NAICS 4246)                                       | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Other Miscellaneous Store Retailers (NAICS 4539)   | 5.34             | 0.33     | 1.61  | 0.88            | 36.03               | 44.20 | 55.80     |
| Other Wood Product Manufacturing (NAICS 3219)  | 45.27            | 0.31     | 1.26  | 0.00            | 12.59               | 59.43 | 40.57     |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)                 | 5.21             | 0.48     | 1.92  | 0.00            | 12.48               | 20.09 | 79.91     |
| Office Administrative Services (NAICS 5611)  | 12.41            | 1.86     | 3.72  | 0.64            | 17.26               | 35.88 | 64.12     |
| Other Professional, Scientific, and Technical Services (NAICS 5419)                                  | 22.23            | 5.03     | 1.02  | 0.62            | 18.04               | 46.95 | 53.05     |
| Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Main | 10.00            | 0.18     | 1.43  | 0.67            | 18.25               | 30.53 | 69.47     |
| Medical Equipment and Supplies Manufacturing (NAICS 3391)  | 0.59             | 0.16     | 1.44  | 0.82            | 47.09               | 50.10 | 49.90     |
| Paper and Paper Product Merchant Wholesalers (NAICS 4241)  | 7.21             | 0.48     | 2.19  | 0.25            | 18.35               | 28.48 | 71.52     |

## M/WBE Availability in Augusta's Marketplace

| Detailed Industry  | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Investigation and Security Services (NAICS 5616)                                     | 8.39             | 0.47     | 1.51  | 1.44            | 29.19               | 41.00 | 59.00     |
| Wired Telecommunications Carriers (NAICS 5171)                                       | 26.65            | 0.21     | 3.86  | 0.60            | 23.65               | 54.97 | 45.03     |
| Lawn and Garden Equipment and Supplies Stores (NAICS 4442)                           | 0.63             | 0.31     | 1.26  | 0.00            | 32.23               | 34.43 | 65.57     |
| Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371) | 0.63             | 0.31     | 1.26  | 0.00            | 57.23               | 59.43 | 40.57     |
| Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)                   | 1.16             | 0.54     | 2.39  | 0.23            | 17.68               | 22.00 | 78.00     |
| Fabric Mills (NAICS 3132)  | 1.10             | 0.55     | 2.20  | 0.00            | 12.66               | 16.51 | 83.49     |
| Other General Purpose Machinery Manufacturing (NAICS 3339)                           | 0.94             | 0.47     | 26.89 | 0.00            | 10.85               | 39.15 | 60.85     |
| Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)            | 9.57             | 0.46     | 1.29  | 1.01            | 15.13               | 27.46 | 72.54     |
| Clay Product and Refractory Manufacturing (NAICS 3271)                               | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Employment Services (NAICS 5613)   | 20.10            | 2.19     | 1.05  | 4.49            | 24.89               | 52.72 | 47.28     |
| Land Subdivision (NAICS 2372)  | 11.32            | 0.05     | 1.34  | 0.70            | 15.26               | 28.68 | 71.32     |
| Aerospace Product and Parts Manufacturing (NAICS 3364)                               | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Direct Selling Establishments (NAICS 4543)   | 1.12             | 0.56     | 2.24  | 0.00            | 12.86               | 16.77 | 83.23     |
| Other Chemical Product and Preparation Manufacturing (NAICS 3259)                    | 0.69             | 40.13    | 1.81  | 1.30            | 32.46               | 76.38 | 23.62     |
| Couriers and Express Delivery Services (NAICS 4921)                                  | 8.82             | 0.00     | 1.47  | 0.74            | 10.29               | 21.32 | 78.68     |
| Electric Lighting Equipment Manufacturing (NAICS 3351)                               | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Other Textile Product Mills (NAICS 3149)   | 0.95             | 0.44     | 1.98  | 0.23            | 36.18               | 39.78 | 60.22     |
| Office Supplies, Stationery, and Gift Stores (NAICS 4532)                            | 1.78             | 0.41     | 2.51  | 0.87            | 34.49               | 40.07 | 59.93     |
| Business Support Services (NAICS 5614)   | 4.31             | 1.05     | 1.99  | 0.74            | 44.73               | 52.82 | 47.18     |

## M/WBE Availability in Augusta's Marketplace

| Detailed Industry  | African-American | Hispanic    | Asian       | Native American | Non-minority Female | M/WBE        | Non-M/WBE    |
|--|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Limited-Service Eating Places (NAICS 7222)                       | 20.12            | 0.25        | 1.30        | 20.15           | 9.99                | 51.81        | 48.19        |
| Jewelry, Luggage, and Leather Goods Stores (NAICS 4483)          | 2.52             | 0.52        | 2.34        | 0.12            | 13.77               | 19.28        | 80.72        |
| Activities Related to Real Estate (NAICS 5313)                   | 13.55            | 0.21        | 1.29        | 0.75            | 24.45               | 40.25        | 59.75        |
| Florists (NAICS 4531)  | 8.04             | 0.35        | 3.78        | 2.39            | 35.67               | 50.23        | 49.77        |
| Drycleaning and Laundry Services (NAICS 8123)                    | 8.82             | 0.00        | 1.47        | 0.74            | 10.29               | 21.32        | 78.68        |
| Office Furniture (including Fixtures) Manufacturing (NAICS 3372) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| <i>TOTAL</i>   | <i>15.22</i>     | <i>2.70</i> | <i>0.63</i> | <i>0.58</i>     | <i>13.24</i>        | <i>32.37</i> | <i>67.63</i> |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.14. Detailed M/WBE Availability—CRS, 2009**

| Detailed Industry   | African-American | Hispanic    | Asian       | Native American | Non-minority Female | M/WBE        | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Architectural, Engineering, and Related Services (NAICS 5413)                               | 16.07            | 2.46        | 7.18        | 0.49            | 25.69               | 51.89        | 48.11        |
| Building Equipment Contractors (NAICS 2382)   | 9.05             | 1.76        | 0.00        | 0.98            | 7.99                | 19.79        | 80.21        |
| Remediation and Other Waste Management Services (NAICS 5629)                                | 8.21             | 0.25        | 1.41        | 0.83            | 24.82               | 35.51        | 64.49        |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 26.10            | 1.31        | 2.99        | 0.65            | 21.30               | 52.36        | 47.64        |
| Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)                   | 9.57             | 0.46        | 1.29        | 1.01            | 15.13               | 27.46        | 72.54        |
| Investigation and Security Services (NAICS 5616)  | 4.47             | 0.71        | 1.63        | 1.99            | 39.10               | 47.90        | 52.10        |
| Scientific Research and Development Services (NAICS 5417)                                   | 13.27            | 4.21        | 12.88       | 1.32            | 17.73               | 49.41        | 50.59        |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)                      | 8.68             | 3.29        | 6.57        | 0.61            | 14.74               | 33.89        | 66.11        |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 1.09             | 0.55        | 2.18        | 0.00            | 19.20               | 23.02        | 76.98        |
| Services to Buildings and Dwellings (NAICS 5617)  | 14.47            | 0.14        | 1.33        | 0.71            | 13.83               | 30.47        | 69.53        |
| Limited-Service Eating Places (NAICS 7222)  | 20.12            | 0.25        | 1.30        | 20.15           | 9.99                | 51.81        | 48.19        |
| Business Support Services (NAICS 5614)  | 4.31             | 1.05        | 1.99        | 0.74            | 44.73               | 52.82        | 47.18        |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 1.09             | 0.55        | 2.18        | 0.00            | 19.20               | 23.02        | 76.98        |
| <i>TOTAL</i>  | <i>13.36</i>     | <i>2.78</i> | <i>5.84</i> | <i>0.62</i>     | <i>22.33</i>        | <i>44.93</i> | <i>55.07</i> |

Source: See Table 4.1.

**Table 4.15. Detailed M/WBE Availability—Services, 2009**

| Detailed Industry  | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Architectural, Engineering, and Related Services (NAICS 5413)                        | 13.48            | 3.03     | 6.72  | 0.57            | 25.56               | 49.36 | 50.64     |
| Legal Services (NAICS 5411)  | 9.49             | 0.07     | 1.54  | 0.68            | 13.21               | 24.99 | 75.01     |
| Software Publishers (NAICS 5112)   | 37.14            | 3.72     | 13.91 | 5.17            | 15.91               | 75.85 | 24.15     |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231) | 5.21             | 0.48     | 1.92  | 0.00            | 12.48               | 20.09 | 79.91     |
| Building Equipment Contractors (NAICS 2382)  | 9.71             | 1.67     | 0.68  | 1.11            | 10.06               | 23.22 | 76.78     |
| Computer Systems Design and Related Services (NAICS 5415)                            | 43.05            | 0.87     | 9.27  | 0.38            | 12.88               | 66.45 | 33.55     |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)               | 23.63            | 2.30     | 3.37  | 0.90            | 22.22               | 52.42 | 47.58     |
| Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)           | 0.97             | 0.38     | 2.16  | 0.65            | 23.46               | 27.63 | 72.37     |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)    | 8.70             | 0.12     | 1.47  | 0.80            | 15.69               | 26.78 | 73.22     |
| Audio and Video Equipment Manufacturing (NAICS 3343)                                 | 0.63             | 0.31     | 1.26  | 0.00            | 7.23                | 9.43  | 90.57     |
| Nonresidential Building Construction (NAICS 2362)                                    | 20.47            | 4.03     | 0.03  | 0.40            | 11.48               | 36.41 | 63.59     |
| Business Support Services (NAICS 5614)   | 13.53            | 2.70     | 1.17  | 1.13            | 61.95               | 80.48 | 19.52     |
| Remediation and Other Waste Management Services (NAICS 5629)                         | 8.47             | 0.25     | 1.38  | 0.83            | 24.81               | 35.73 | 64.27     |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                 | 1.31             | 0.63     | 2.51  | 0.00            | 14.49               | 18.95 | 81.05     |
| Advertising, Public Relations, and Related Services (NAICS 5418)                     | 20.13            | 0.71     | 1.82  | 0.53            | 20.99               | 44.18 | 55.82     |
| Wired Telecommunications Carriers (NAICS 5171)                                       | 26.65            | 0.21     | 3.86  | 0.60            | 23.65               | 54.97 | 45.03     |
| Data Processing, Hosting, and Related Services (NAICS 5182)                          | 58.20            | 3.09     | 0.54  | 0.39            | 33.25               | 95.46 | 4.54      |
| Utility System Construction (NAICS 2371)   | 5.14             | 0.46     | 0.04  | 0.33            | 17.08               | 23.04 | 76.96     |

## M/WBE Availability in Augusta's Marketplace

| Detailed Industry   | African-American | Hispanic    | Asian       | Native American | Non-minority Female | M/WBE        | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Electronics and Appliance Stores (NAICS 4431)   | 27.07            | 0.21        | 12.45       | 0.88            | 28.34               | 68.95        | 31.05        |
| Investigation and Security Services (NAICS 5616)  | 21.98            | 0.39        | 1.14        | 3.37            | 24.04               | 50.92        | 49.08        |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)                       | 10.21            | 1.22        | 0.00        | 0.74            | 6.47                | 18.64        | 81.36        |
| Services to Buildings and Dwellings (NAICS 5617)  | 14.47            | 0.14        | 1.33        | 0.71            | 13.83               | 30.47        | 69.53        |
| Computer and Peripheral Equipment Manufacturing (NAICS 3341)                                | 76.84            | 0.37        | 0.37        | 0.37            | 18.75               | 96.69        | 3.31         |
| Scientific Research and Development Services (NAICS 5417)                                   | 27.20            | 3.15        | 9.53        | 0.96            | 18.56               | 59.40        | 40.60        |
| Other Textile Product Mills (NAICS 3149)  | 0.63             | 0.31        | 1.26        | 0.00            | 57.23               | 59.43        | 40.57        |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.91             | 0.46        | 1.83        | 0.00            | 10.52               | 13.72        | 86.28        |
| Other Specialty Trade Contractors (NAICS 2389)  | 9.38             | 1.26        | 2.63        | 0.95            | 15.25               | 29.47        | 70.53        |
| Building Finishing Contractors (NAICS 2383)   | 9.60             | 2.13        | 2.25        | 2.17            | 8.71                | 24.87        | 75.13        |
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)                               | 4.52             | 0.47        | 2.18        | 0.29            | 21.07               | 28.53        | 71.47        |
| General Freight Trucking (NAICS 4841)   | 15.97            | 0.74        | 1.23        | 0.68            | 16.47               | 35.08        | 64.92        |
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345) | 38.58            | 0.25        | 1.66        | 0.65            | 22.71               | 63.85        | 36.15        |
| <i>TOTAL</i>  | <i>13.11</i>     | <i>2.01</i> | <i>4.45</i> | <i>0.71</i>     | <i>19.82</i>        | <i>40.11</i> | <i>59.89</i> |

Source: See Table 4.1.

**Table 4.16. Detailed M/WBE Availability—Commodities, 2009**

| Detailed Industry   | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)                          | 1.16             | 0.54     | 2.39  | 0.23            | 17.68               | 22.00 | 78.00     |
| Automobile Dealers (NAICS 4411)   | 2.12             | 0.51     | 2.11  | 0.08            | 17.20               | 22.01 | 77.99     |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                        | 1.90             | 0.87     | 5.81  | 0.36            | 19.59               | 28.54 | 71.46     |
| Highway, Street, and Bridge Construction (NAICS 2373)                                       | 10.02            | 0.00     | 0.00  | 0.00            | 27.99               | 38.01 | 61.99     |
| Communications Equipment Manufacturing (NAICS 3342)   | 40.22            | 0.00     | 20.65 | 0.65            | 18.78               | 80.30 | 19.70     |
| Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)        | 10.30            | 0.37     | 1.90  | 0.22            | 17.64               | 30.44 | 69.56     |
| Electronics and Appliance Stores (NAICS 4431)   | 25.79            | 0.21     | 11.81 | 0.85            | 27.34               | 66.01 | 33.99     |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 1.09             | 0.55     | 2.18  | 0.00            | 19.20               | 23.02 | 76.98     |
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345) | 0.22             | 5.14     | 0.33  | 0.00            | 82.95               | 88.65 | 11.35     |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 28.93            | 2.63     | 13.05 | 0.53            | 21.56               | 66.70 | 33.30     |
| Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)                         | 24.48            | 0.02     | 0.87  | 0.79            | 42.53               | 68.69 | 31.31     |
| Grocery and Related Product Merchant Wholesalers (NAICS 4244)                               | 0.83             | 0.36     | 1.79  | 0.36            | 16.29               | 19.63 | 80.37     |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4221)        | 5.21             | 0.48     | 1.92  | 0.00            | 12.48               | 20.09 | 79.91     |
| Chemical and Allied Products Merchant Wholesalers (NAICS 4246)                              | 4.02             | 3.84     | 5.45  | 0.11            | 17.73               | 31.15 | 68.85     |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.90             | 0.34     | 2.01  | 0.67            | 28.22               | 32.13 | 67.87     |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)           | 8.70             | 0.12     | 1.47  | 0.80            | 15.69               | 26.78 | 73.22     |
| Other Motor Vehicle Dealers (NAICS 4412)  | 1.11             | 0.56     | 2.22  | 0.00            | 20.23               | 24.12 | 75.88     |
| Building Equipment Contractors (NAICS 2382)   | 10.14            | 1.78     | 0.56  | 1.09            | 8.96                | 22.54 | 77.46     |

## M/WBE Availability in Augusta's Marketplace

| Detailed Industry   | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)                                     | 7.82             | 0.59     | 2.31  | 0.31            | 21.45               | 32.48 | 67.52     |
| Remediation and Other Waste Management Services (NAICS 5629)                                      | 9.05             | 0.04     | 1.25  | 0.69            | 11.93               | 22.97 | 77.03     |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)                             | 10.68            | 1.15     | 0.00  | 0.96            | 13.34               | 26.12 | 73.88     |
| Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)                                  | 0.99             | 0.50     | 1.99  | 0.00            | 11.42               | 14.90 | 85.10     |
| Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)                            | 1.05             | 0.48     | 2.19  | 0.25            | 24.51               | 28.48 | 71.52     |
| Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)                                 | 1.15             | 0.52     | 2.21  | 1.31            | 18.73               | 23.92 | 76.08     |
| Software Publishers (NAICS 5112)  | 37.14            | 3.72     | 13.91 | 5.17            | 15.91               | 75.85 | 24.15     |
| Nonmetallic Mineral Mining and Quarrying (NAICS 2123)   | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Printing and Related Support Activities (NAICS 3231)  | 9.91             | 0.41     | 2.12  | 0.49            | 26.56               | 39.49 | 60.51     |
| Other Ambulatory Health Care Services (NAICS 6219)  | 8.82             | 0.00     | 1.47  | 0.74            | 10.29               | 21.32 | 78.68     |
| Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)                                | 17.76            | 0.51     | 2.06  | 0.00            | 13.05               | 33.38 | 66.62     |
| Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252) | 1.26             | 0.63     | 2.52  | 0.00            | 14.47               | 18.87 | 81.13     |
| Other Miscellaneous Manufacturing (NAICS 3399)  | 1.64             | 1.01     | 2.58  | 0.83            | 31.50               | 37.56 | 62.44     |
| Other Fabricated Metal Product Manufacturing (NAICS 3329)   | 1.19             | 0.39     | 2.80  | 1.25            | 37.19               | 42.82 | 57.18     |
| Utility System Construction (NAICS 2371)  | 5.14             | 0.46     | 0.04  | 0.33            | 17.08               | 23.04 | 76.96     |
| Architectural, Engineering, and Related Services (NAICS 5413)                                     | 4.18             | 1.18     | 5.92  | 1.23            | 19.00               | 31.51 | 68.49     |
| Medical Equipment and Supplies Manufacturing (NAICS 3391)   | 0.59             | 0.16     | 1.44  | 0.82            | 47.09               | 50.10 | 49.90     |
| Computer and Peripheral Equipment Manufacturing (NAICS 3341)                                      | 76.84            | 0.37     | 0.37  | 0.37            | 18.75               | 96.69 | 3.31      |
| Commercial and Service Industry Machinery Manufacturing (NAICS 3333)                              | 30.18            | 33.54    | 0.84  | 0.00            | 8.39                | 72.96 | 27.04     |



## M/WBE Availability in Augusta's Marketplace

| Detailed Industry   | African-American | Hispanic    | Asian       | Native American | Non-minority Female | M/WBE        | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Converted Paper Product Manufacturing (NAICS 3222)                        | 0.00             | 100.00      | 0.00        | 0.00            | 0.00                | 100.00       | 0.00         |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)    | 8.68             | 3.29        | 6.57        | 0.61            | 14.74               | 33.89        | 66.11        |
| Services to Buildings and Dwellings (NAICS 5617)                          | 14.47            | 0.14        | 1.33        | 0.71            | 13.83               | 30.47        | 69.53        |
| Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233) | 1.01             | 0.50        | 2.01        | 0.00            | 14.43               | 17.95        | 82.05        |
| Office Supplies, Stationery, and Gift Stores (NAICS 4532)                 | 0.69             | 0.28        | 5.67        | 1.10            | 41.26               | 49.00        | 51.00        |
| Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)      | 18.85            | 0.07        | 5.57        | 0.63            | 11.63               | 36.75        | 63.25        |
| Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)   | 0.94             | 0.47        | 18.55       | 2.78            | 13.63               | 36.37        | 63.63        |
| General Freight Trucking (NAICS 4841)                                     | 17.95            | 0.60        | 1.24        | 0.68            | 16.13               | 36.60        | 63.40        |
| Wired Telecommunications Carriers (NAICS 5171)                            | 26.65            | 0.21        | 3.86        | 0.60            | 23.65               | 54.97        | 45.03        |
| Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)    | 9.08             | 0.25        | 2.86        | 0.69            | 17.26               | 30.14        | 69.86        |
| Aerospace Product and Parts Manufacturing (NAICS 3364)                    | 1.26             | 0.63        | 2.52        | 0.00            | 14.47               | 18.87        | 81.13        |
| Building Finishing Contractors (NAICS 2383)                               | 9.58             | 2.58        | 3.21        | 2.88            | 9.16                | 27.41        | 72.59        |
| Drycleaning and Laundry Services (NAICS 8123)                             | 8.82             | 0.00        | 1.47        | 0.74            | 10.29               | 21.32        | 78.68        |
| <i>TOTAL</i>  | <i>6.52</i>      | <i>0.76</i> | <i>3.84</i> | <i>0.29</i>     | <i>19.13</i>        | <i>30.54</i> | <i>69.46</i> |

Source: See Table 4.1.

## M/WBE Availability in Augusta's Marketplace

**Table 4.17. Estimated Availability—Overall and By Procurement Category**

| Detailed Industry | African-American | Hispanic | Asian | Native American | Non-minority Female | M/WBE | Non-M/WBE |
|-------------------|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| CONSTRUCTION      | 15.22            | 2.70     | 0.63  | 0.58            | 13.24               | 32.37 | 67.63     |
| CRS               | 13.36            | 2.78     | 5.84  | 0.62            | 22.33               | 44.93 | 55.07     |
| SERVICES          | 13.11            | 2.01     | 4.45  | 0.71            | 19.82               | 40.11 | 59.89     |
| COMMODITIES       | 6.52             | 0.76     | 3.84  | 0.29            | 19.13               | 30.54 | 69.46     |
| TOTAL             | 14.26            | 2.52     | 1.87  | 0.58            | 15.41               | 34.64 | 65.36     |

Source: See Table 4.1.

## **V. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings**

### **A. Review of Relevant Literature**

In this chapter we examine disparities in business formation and earnings principally in the private sector, where contracting activities are generally *not* subject to MWBE or other affirmative action requirements. Statistical examination of disparities in the private sector of the relevant geographic marketplace is important for several reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of MWBEs to compete, those practices will impact the larger private sector as well as the public sector. Second, examining the utilization of MWBEs in the private sector provides an indicator of the extent to which MWBEs are used in the absence of race-conscious efforts, since few firms in the private sector make such efforts. Third, the Supreme Court in *Croson* and other courts acknowledged that state and local governments have a constitutional duty not to contribute to the perpetuation of discrimination in the private sector of their relevant geographic and product markets.

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—is beginning to expand.<sup>133</sup> There is a good deal of agreement in the literature on the micro-economic correlates of self-employment. Aronson (1991) provides a good overview. In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among non-minorities than African-Americans. The least educated have the highest probability of being self-employed. However, evidence is also found in the U.S. that the most highly educated also have relatively high probabilities. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

There has been relatively less work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, 1987), immigration (Fairlie and Meyer, 1998; 2003),<sup>134</sup> immigration policy (Borjas and Bronars,

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<sup>133</sup> Microeconomic work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie (1999), Fairlie and Meyer (1996, 1998), Reardon (1998), Wainwright (2000) for the United States, Rees and Shah (1986), Pickles and O'Farrell (1987), Blanchflower and Oswald (1990, 1998), Blanchflower and Freeman (1994), Meager (1992), Taylor (1996), and Robson (1998a, 1998b) for the UK, DeWit and van Winden (1990) for the Netherlands, Alba-Ramirez (1994) for Spain, Bernhardt (1994), Schuetze (1998), Arai (1997), Lentz and Laband (1990), and Kuhn and Schuetze (1998) for Canada, Laferrere and McEntee (1995) for France, Blanchflower and Meyer (1994) and Kidd (1993) for Australia, and Foti and Vivarelli (1994) for Italy. There are also several theoretical papers including Kihlstrom and Laffonte (1979), Kanbur (1982), Croate and Tennyson (1992), and Holmes and Schmitz (1990), plus a few papers that draw comparisons across countries *i.e.* Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994) for many countries.

<sup>134</sup> Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on African-American self-employment. In a subsequent paper Fairlie and Meyer (2004), found that self-employed immigrants

## Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

1989), and retirement policies (Quinn, 1980). Studies by Long (1982), and Blau (1987), and more recently by Schuetze (1998), have considered the role of taxes.<sup>135</sup> A number of other studies have also considered the cyclical aspects of self-employment and in particular how movements of self-employment are correlated with movements in unemployment. Meager (1992), provides a useful summary of much of this work. Evans and Leighton (1989) found that non-minority men who are unemployed are nearly twice as likely as wage workers to enter self-employment. Bogenhold and Staber (1991) also find evidence that unemployment and self-employment are positively correlated. Blanchflower and Oswald (1990) found a strong negative relationship between regional unemployment and self-employment for the period 1983-1989 in the U.K. using a pooled cross-section time-series data set. Blanchflower and Oswald (1998) confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment model for young people age 23 in 1981 and for the same people aged 33 in 1991. Taylor (1996) confirmed this result using data from the British Household Panel Study of 1991, showing that the probability of being self-employed rises when expected self-employment earnings increase relative to employee earnings, *i.e.*, when unemployment is low. Acs and Evans (1994) found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation. However, Schuetze (1998) found that for the U.S. and Canada the elasticity of the male self-employment rate with respect to the unemployment rate was considerably smaller than found for the effect from taxes discussed above. The elasticity of self-employment associated with the unemployment rate is about 0.1 in both countries using 1994 figures. A decrease of 5 percentage points in the unemployment rate in the U.S. (about the same decline occurred from 1983-1989) leads to about a 1 percentage point decrease in self-employment. Blanchflower (2000) found that there is generally a negative relationship between the self-employment rate and the unemployment rate. It does seem then that there is some disagreement in the literature on whether high unemployment acts to discourage self-employment because of the lack of available opportunities or encourage it because of the lack of viable alternatives.

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.<sup>136</sup> In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question.

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did displace self-employed native non-African-Americans. They found that immigration has a large negative effect on the probability of self-employment among native non-African-Americans, although, surprisingly, they found that immigrants increase native self-employment earnings.

<sup>135</sup> In an interesting study pooling individual level data for the U.S. and Canada from the CPS and the Survey of Consumer Finances, respectively, Schuetze (1998), finds that increases in income taxes have large and positive effects on the male self-employment rate. He found that a 30 percent increase in taxes generated a rise of 0.9 to 2.0 percentage points in the male self-employment rate in Canada compared with a rise of 0.8 to 1.4 percentage points in the U.S. over 1994 levels.

<sup>136</sup> The OECD is an international organization of those developed countries that accept the principles of representative democracy and a free market economy. There are currently 30 full members.

Why do so few individuals in the U.S. and OECD countries manage to translate their preferences into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also econometric evidence that confirms this barrier. Holding other influences constant, people who inherit cash, who win the lottery, or who have large family assets, are all more likely both to set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to have almost no predictive power about which persons will be running their own businesses as adults (Blanchflower and Oswald, 1998).

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.<sup>137</sup> Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b), drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit.

The work of Black *et al.* (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997), find a similar result. Again this is suggestive of capital constraints. Finally, Lindh and Ohlsson (1996) adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden. Bernhardt (1994), in a study for Canada, using data from the 1981 Social Change in Canada Project also found evidence that capital constraints appear to bind. Using the 1991 French Household Survey of Financial Assets, Laferrere and McEntee (1995), examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital and a range of demographic variables. They also find evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital and the structure of the family were found to be determining factors in the decision to move from wage work into entrepreneurship. Broussard *et al.* (2003) found that the self-employed have between

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<sup>137</sup> This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives.

## **Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings**

0.2 and 0.4 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction and in agriculture, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of African-Americans in particular who do not have as strong a history of business ownership as indigenous non-minorities. Analogously, Hout and Rosen (2000) found that the offspring of self-employed fathers are more likely than others to become self-employed and argued that the historically low rates of self-employment among African-Americans and Latinos may contribute to their low contemporary rates.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of African-American males is one third of that of non-minority males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels “did not have large effects on the trend in the racial gap in self-employment” (p. 662). They also found that an initial lack of business experience “cannot explain the current low levels of black self-employment.” Further they found that “the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment” (p. 664).

Fairlie (1998) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African-American and non-minority self-employment rate can be attributed to discrimination. Using PUMS data from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1998) also found that the African-American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same rate as it does into bath B -- that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African-American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the non-minority firms). When we return after 10 minutes, even though the inflow rates are the same there is much less water in bath A than there is in bath B. A lower exit rate for non-minority-owned firms than is found for minority-owned firms is perfectly consistent with the observed fact that minority-owned firms are younger and smaller than non-minority-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

### **B. Race and Sex Disparities in Earnings**

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their non-minority male counterparts. Other things equal,

if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly-situated non-minorities because of discrimination, then failure rates for MWBEs will be higher and MWBE formation rates will be lower than would be observed in a race- and gender-neutral marketplace. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, that is, non-business owners. It is helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower, 2000; 2004). Employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential MWBEs. In almost every instance examined, a statistically significant adverse impact on wage and salary earnings is observed—both the economy at large and also in the construction and construction-related professional services sector.<sup>138</sup>

We then turn to an examination of differences in earnings among the self-employed, that is, among business owners. Here too, among the pool of minorities and women who have formed businesses despite discrimination in both employment opportunities and business opportunities, statistically significant adverse impacts are observed in the vast majority of cases in construction and construction-related professional services (hereafter, “construction”), and other sectors of the economy.

In the remainder of this Chapter we discuss the methods and data we employed and present the specific findings.

### 1. Methods

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or sex differences remain. In a discrimination free marketplace, one would not expect to observe significant differences in earnings by race or sex among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to the ARC’s relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator

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<sup>138</sup> There is a growing body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to obtain them there is evidence that these loans are not obtained on equal terms: minority-owned firms have to pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. See Chapter VI, *infra*.

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variable for Augusta. This model appears as Specification (1) in Tables 5.1 through 5.12. Next, we estimated Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race and sex with the Augusta indicator. Specification (3) represents our ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification (2) that were statistically significant.<sup>139</sup>

Any negative and statistically significant differences by race or sex that remain in Specification (3) after holding all of these other factors constant—time, age, education, geography, and industry—are consistent with what would be observed in a market suffering from business-related discrimination.<sup>140</sup>

## 2. Data

The analyses undertaken in this Study require individual-level data (*i.e.* “microdata”) with relevant information on business ownership status and other key socioeconomic characteristics. Two primary data sources are used.

The first is the Five Percent Public Use Microdata Samples (PUMS) from the 2000 decennial census. The 2000 PUMS contains observations representing five percent of all U.S. housing units and the persons in them (approximately 14 million records). Released in late 2003, the PUMS provides the full range of population and housing information collected in the 2000 census. Business ownership status is identified in the PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

The second source of data is the Annual Demographic File from the Current Population Survey (CPS).<sup>141</sup> The CPS has been conducted monthly by the Census Bureau and the Bureau of Labor Statistics for over 40 years, and is a primary source of official government statistics on employment and unemployment. Currently, about 56,500 households are scientifically selected for the CPS on the basis of area of residence in order to represent the nation as a whole, individual states and the largest metropolitan areas. In addition to information on employment status, the CPS collects information on age, sex, race, marital status, educational attainment, earnings, occupation, industry, and other characteristics. These statistics serve to update the information collected every 10 years through the decennial census.

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<sup>139</sup>If none of these terms is significant then Specification (3) reduces to Specification (1).

<sup>140</sup> Typically, a given test statistic is considered to be statistically significant if there is a reasonably low probability that the value of the statistic is due to random chance alone. In this and the two following chapters we typically indicate three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance.

<sup>141</sup> The Annual Demographic Survey of the CPS is conducted each March. It contains all the monthly CPS data plus additional data on work experience, income and earnings, noncash benefits, and migration. *See* King, Ruggles, et al. (2004).



### **3. Findings: Race and Sex Disparities in Wage and Salary Earnings**

Tables 5.1 through 5.6 report results from our regression analyses of annual earnings among wage and salary workers. Tables 5.1 through 5.3 focus on the economy as a whole and Tables 5.4 through 5.6 on Construction and CRS. Tables 5.1 and 5.4 are derived from the 2000 PUMS, Tables 5.2 and 5.5 are derived from the 1980–1991 March CPS files, and Tables 5.3 and 5.6 are derived from the 1992–2008 March CPS files. The numbers shown in each of these six tables indicate the percentage difference between the average wages of a given race/sex group and comparable non-minority males.

#### **a. Specification (1) - the Basic Model**

For example, in Table 5.1 Specification (1) the estimated percentage difference in annual wages between African-Americans (both sexes) and non-minority males in 2000 was -29.6 percent. That is, average annual wages among African-Americans were 29.6 percent lower than for non-minority males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 5.1 through 5.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.<sup>142</sup> In the example just used, the t-statistic of 182.01 indicates that the result is statistically significant.

Specification (1) in Tables 5.1-5.3 shows adverse and statistically significant wage disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and non-minority women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -12.6 percent for multiple races in Table 5.2 to a high of -35.8 percent for non-minority women in Table 5.1.

Specification (1) in Tables 5.4 through 5.6 shows similar results when the basic analysis is restricted to the Construction industries and the Architecture and Engineering (CRS) industries. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African-Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and non-minority women. For Hispanics, Asians, and Native Americans, the disparities in the Construction and CRS sector are somewhat smaller than those observed in the economy as a whole. For African-Americans and non-minority women, they are somewhat larger.

A comparison of Tables 5.2 and 5.3 shows changes in observed wage disparities over time for the economy as a whole. Tables 5.5 and 5.6 do the same for Construction and CRS.

For African-Americans between 1980 and 1991, the wage disparity in the economy as a whole was 30.2 percent, shrinking slightly to 28.0 percent in the 1992-2008 period. In Construction and CRS, the disparity was 35.2 percent in the earlier period. Although diminishing significantly in recent years, to 24.2 percent, the disparity remains substantial.

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<sup>142</sup> From a two-tailed test.

## **Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings**

For Hispanics between 1980 and 1991, the wage disparity in the economy as a whole was 20.4 percent, shrinking slightly to 19.7 percent in the 1992-2008 period. In Construction and CRS, the disparity was 15.7 percent in the earlier period, increasing slightly to 16.8 percent in more recent years.

For Asians and Native Americans, tracking time trends is more difficult since in the earlier period these two groups were combined together in the CPS into the category “Other race.” In the economy as a whole, the wage disparity for the “Other race” category in the 1980-1991 period was 12.6 percent. In the 1992-2008 period, the wage disparities worsened significantly: to 21.7 percent for Asians and 23.4 percent for Native Americans. In Construction and CRS, the “Other race” disparity in the earlier period was 12.8 percent, growing to 18.3 percent for Asians and 15.6 percent for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the wage disparity in the economy as a whole was 28.3 percent, shrinking to 21.7 percent in the 1992-2008 period. In Construction and CRS, the disparity was 30.2 percent in the earlier period and, although diminishing significantly in recent years to 20.7 percent, the disparity remains large.

### **b. Specifications (2) and (3) - the Full Model Including Augusta-Specific Interaction Terms**

Next, we turn to Specifications (2) and (3) in Tables 5.1 through 5.6. In each of these Tables, Specification (2) is the basic regression model with a set of interaction terms added that test whether minorities and women in the Augusta MSA differ significantly from those elsewhere in the U.S. economy. Specification (2) in Table 5.1, for example, shows a -32.4 percent wage difference that estimates the direct effect of being Native American in 2000, as well as a statistically significant -10.9 percent wage decrement in that year that captures the indirect effect of residing in Augusta and being Native American. That is, wages for Native Americans in Augusta, on average, were 10.9 percent lower than for Native Americans in the nation as a whole and 43.3 percent (32.4 percent plus 10.9 percent) lower than for non-minority males in the nation as a whole.

Specification (3) simply repeats Specification (2), dropping any Augusta interactions that are not statistically significant. In Table 5.1, for example, the only interaction terms included in the final specification were for Hispanics, Native Americans, and non-minority women. The net result of Specification (3) in Tables 5.1, 5.2 and 5.3 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for non-minority women. In Tables 5.4, 5.5 and 5.6, for Construction and CRS, there is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for non-minority women as well.

### **c. Conclusions**

Clearly, minorities and women earn substantially and significantly less from their labor than do their non-minority male counterparts—in the Augusta MSA just as in the nation as a whole. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of MWBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies

that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere “societal discrimination” because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower MWBE availability levels than would be observed in a race- and gender-neutral marketplace.

#### **4. Findings: Race and Sex Disparities in Business Owner Earnings**

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and sex disparities in business owner earnings. Tables 5.7 through 5.9 focus on the economy as a whole and Tables 5.10 through 5.12 on Construction and CRS. Tables 5.7 and 5.10 are derived from the 2000 PUMS, Tables 5.8 and 5.11 are derived from the 1980–1991 CPS, and Tables 5.9 and 5.12 are derived from the 1992–2008 CPS. The numbers shown in each of these six tables indicate the percentage difference between the average annual self-employment earnings of a given race/sex group and comparable non-minority males.

##### **a. Specification (1) - the Basic Model**

Specification (1) in Tables 5.7 through 5.9 shows large, adverse, and statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets. The measured difference for African-Americans ranges between 28 percent and 34 percent lower than for comparable non-minority males; for Hispanics, from 19 percent to 25 percent; for Asians, from 4 percent to 21 percent; for Native Americans, from 4 percent to 28 percent; and for non-minority women from 38 percent to 46 percent.

Turning to the Construction and CRS sector, Specification (1) in Tables 5.10 through 5.12 shows large, adverse, and, with two exceptions, statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets.<sup>143</sup> The measured difference for African-Americans ranges between 23 percent and 40 percent lower than for comparable non-minority males; for Hispanics, from 14 percent to 16 percent; for Asians, from 0.4 percent to 13 percent; for Native Americans, from 0.4 percent to 37 percent; and for non-minority women from 22 percent to 51 percent.

A comparison of Tables 5.8 and 5.9 shows changes in observed business owner earnings disparities over time for the economy as a whole. Tables 5.11 and 5.12 do the same for Construction and CRS.

For African-Americans between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 33.6 percent, shrinking to 28.0 percent in the 1992-2008 period. In

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<sup>143</sup> The adverse disparities for Asians/Pacific Islanders in Table 5.10 and “Other races” in Table 5.11 were not statistically significant.

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Construction and CRS, the disparity was 39.6 percent in the earlier period. Although diminishing significantly in recent years, to 23.3 percent, the disparity remains quite large.

For Hispanics between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 19.9 percent, increasing to 24.8 percent in the 1992-2008 period. In Construction and CRS, the disparity has remained constant at 16.0 percent.

For Asians and Native Americans, tracking time trends is more difficult since in the earlier period these two groups were combined together in the CPS into the category “Other race.” In the economy as a whole, the business owner earnings disparity for the “Other race” category in the 1980-1991 period was 9.0 percent. In the 1992-2008 period, the business owner earnings disparities worsened significantly: to 21.4 percent for Asians and 28.2 percent for Native Americans. In Construction and CRS, the “Other race” disparity in the earlier period was only 0.4 percent, but grew to 13.0 percent for Asians and 12.9 percent for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 45.7 percent, shrinking to 37.8 percent in the 1992-2008 period. In Construction and CRS, the disparity was 38.2 percent in the earlier period and, although diminishing significantly in recent years to 22.4 percent, the disparity remains large.

### **b. Specifications (2) and (3) - the Full Model Including Augusta-Specific Interaction Terms**

Next, we turn to Specifications (2) and (3) in Tables 5.7 through 5.12. Specification (2) is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in Augusta differ significantly from those elsewhere in the U.S. economy. Specification (3) drops any Augusta interaction terms that are not statistically significant.

For the economy as a whole in 2000, Table 5.7 shows that only the Augusta interaction term for non-minority Females is statistically significant, indicating that disparities for minorities in Augusta are no better or worse than in the nation as a whole, while disparities for non-minority women are significantly worse in Augusta than in the nation as a whole. Table 5.8 for the 1980-1991 period, and Table 5.9 for the 1992-2008 period, shows that minorities and non-minority women face disparities in Augusta that are similar to those observed in the nation as a whole.

For the Construction and CRS sector in 2000, Tables 5.10, 5.11, and 5.12 show that the estimates for Augusta are in agreement with results for the nation as a whole.

### **c. Conclusions**

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated non-minority male entrepreneurs. The situation is, in general, little different in Augusta than in the nation as a whole. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect MWBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to that

of similarly situated non-minority males, then growth rates may slow, business failure rates may increase, and as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower MWBE availability levels than would be observed in a race- and gender-neutral marketplace.

### **C. Race and Sex Disparities in Business Formation**

As discussed in the two prior sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In the final section of this chapter, we turn to the analysis of race and sex disparities in business formation.<sup>144</sup> We compare self-employment rates by race and sex to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as similarly-situated non-minority males. We find that they are not as likely to do so and that minority and female business formation rates would likely be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

Discrimination in the labor market, symptoms of which are evidenced in Section B.3 above, might cause wage and salary workers to turn to self-employment in hopes of encountering less discrimination from customers and suppliers than from employers and co-workers. Other things equal, and assuming minority and female workers did not believe that discrimination pervaded commercial markets as well, this would lead minority and female business formation rates to be higher than would otherwise be expected.

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by men who were once employed as foremen for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents minorities and women from acquiring the financial credit and capital that are so often prerequisite to starting or expanding a business. Other things equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against MWBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for MWBEs. This discrimination leads to higher rates of failure for some minority and women firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.<sup>145</sup> All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

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<sup>144</sup> We use the phrases “business formation rates” and “self-employment rates” interchangeably in this Study.

<sup>145</sup> See also the materials cited at fn. 138 *supra*.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

## 1. Methods and Data

To see if minorities or non-minority women are as likely to be business owners as are comparable non-minority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a “yes” or a “no” response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of “yes” (for example, she is in the labor force) or “no” (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.<sup>146</sup> In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2000 PUMS, the 1980-1991 CPS, and the 1992-2008 CPS.

## 2. Findings: Race and Sex Disparities in Business Formation

As a point of reference for what follows, Tables 5.13 and 5.14 provide a summary of business ownership rates in 2000 by race and sex. A striking feature of both tables is how much higher business ownership rates are for non-minority males than for most other groups.

Table 5.13, for example, shows a 7.32 percentage point difference between the overall self-employment rate of African-Americans and non-minority Males in Augusta ( $10.85 - 3.53 = 7.32$ ). In the top panel of Table 5.14, for Construction and CRS, an even larger 11.81 percentage point difference is observed for African-Americans compared to non-minority males in Augusta. As shown in the final column, this 11.81 percentage point gap translates into a African-American business formation rate in the Augusta Construction and CRS sector that is 63.3 percent lower than the non-minority male business formation rate (*i.e.*,  $(6.85 - 18.66)/18.66 \approx -63.3\%$ ). In the Augusta Services and Commodities sector, similarly large business formation rate disparities are observed for all groups except Asians, as the bottom panel of Table 5.14 shows.

For African-Americans nationally, the overall business formation rate is 63.8 percent lower than the non-minority male rate. In Augusta, it is 67.5 percent lower. In the Augusta Construction and CRS sector, the African-American rate is 63.3 percent lower, compared to 42.5 percent lower in

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<sup>146</sup> For a detailed discussion, see G.S. Maddala, *Limited Dependent and Qualitative Variables in Econometrics*, Cambridge University Press, 1983. Probit analysis is performed here using the “dprobit” command in the statistical program STATA.

the U.S. as a whole. In the Augusta Services and Commodities sector, the African-American rate is 62.8 percent lower, compared to 61.9 percent lower for the nation as a whole.

For Hispanics nationally, the overall business formation rate is 48.1 percent lower than the non-minority male rate. In Augusta, it is 15.9 percent lower. In the Augusta Construction and CRS sector, the Hispanic rate is higher than in the U.S. as a whole. In the Augusta Services and Commodities sector, the Hispanic rate is 35.8 percent lower, compared to 45.2 lower percent for the nation as a whole.

For Asians nationally, the overall business formation rate is 25.0 percent lower than the non-minority male rate. In Augusta, it is higher than the non-minority male rate. In the Augusta Construction and CRS sector, however, the Asian rate is 100 percent lower, compared to 34.3 percent lower in the U.S. as a whole. In the Augusta Services and Commodities sector, the Asian rate is higher than the non-minority male rate than for the nation as a whole.

For Native Americans nationally, the overall business formation rate is 41.2 percent lower than the non-minority male rate. In Augusta, it is 40.8 percent lower. In the Augusta Construction and CRS sector, the Native American rate is 100 percent lower, compared to 37.2 percent lower in the U.S. as a whole. In the Augusta Services and Commodities sector, the Native American rate is 22.7 percent lower, compared to 40.6 percent lower for the nation as a whole.

For non-minority women nationally, the overall business formation rate is 39.7 percent lower than the non-minority male rate. In Augusta, it is 28.8 percent lower. In the Augusta Construction and CRS sector, the non-minority female rate is slightly higher than the non-minority male rate, compared to 41.6 percent lower in the U.S. as a whole. In the Augusta Services and Commodities sector, the non-minority female rate is 20.3 percent lower, compared to 31.4 percent lower for the nation as a whole.

There is no doubt that part of the group differences expressed in Tables 5.13 and 5.14 are associated with differences in the distribution of individual characteristics and preferences between minorities, women, and non-minority males. It is well known, for example, that earnings tend to increase with age (experience). It is also true that the propensity toward self-employment increases with experience.<sup>147</sup> Since most minority populations in the United States have a lower median age than the non-Hispanic non-minority population, we must examine whether the disparities in business ownership evidenced in Tables 5.13 and 5.14 are largely—or even entirely—due to differences in the age distribution or other factors such as education, geographic location, or industry preferences of minorities and non-minority women compared to non-minority males.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse, and statistically significant race and sex disparities for minorities and women remain when these other factors are held constant. Tables 5.15 through 5.17 focus on the economy as a whole and Tables 5.18 through 5.20 focus on the Construction and CRS sector. As in previous sections, the first in each triad of tables is derived from the 2000 PUMS, the second

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<sup>147</sup> Wainwright (2000), p. 86.

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from the 1980–1991 CPS, and the third from the 1992–2008 CPS. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/sex group compared to similarly-situated non-minority males.

### **a. Specification (1) - the Basic Model**

Specification (1) in Tables 5.15 through 5.17 shows large, adverse, and statistically significant business formation disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets. Specification (1) in Tables 5.18a through 5.20 shows large, negative, and statistically significant business formation disparities for every group in the Construction and CRSn and Goods and Services sectors as well.

Tables 5.16 and 5.17 for the economy as a whole, and Tables 5.19 and 5.20 for the Construction and CRS sector, show changes in observed business formation disparities over time.

For African-Americans between 1980 and 1991, the business formation rate disparity in the economy as a whole was 3.7 percentage points, remaining essentially unchanged at 3.6 percentage points in the 1992-2008 period. In Construction and CRS, the disparity was 12.2 percentage points in the earlier period, decreasing to 9.9 percentage points in the 1992-2008 period.

For Hispanics between 1980 and 1991, the business formation rate disparity in the economy as a whole was 2.2 percentage points, increasing to 2.8 percentage points in the 1992-2008 period. In Construction and CRS, the disparity was 7.4 percentage points during 1980-1991, increasing to 8.5 percentage points in the 1992-2008 period.

For Asians and Native Americans, in the economy as a whole, the business formation rate disparity for the “Other race” category in the 1980-1991 period was only 0.3 percentage points. In the 1992-2008 period, the business formation rate disparities worsened significantly: to 1.0 percentage points for Asians and 2.1 percentage points for Native Americans. In Construction and CRS, the “Other race” disparity in the earlier period was 7.9 percentage points, falling to 4.2 percentage points for Asians and 6.0 percentage points for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the business formation rate disparity in the economy as a whole was 3.3 percentage points, shrinking to 2.5 percentage points in the 1992-2008 period. In Construction and CRS, the disparity was 12.1 percent in the earlier period, falling to 8.7 percentage points in recent years.

### **b. Specifications (2) and (3) - the Full Model Including Augusta-Specific Interaction Terms**

Several of the Augusta interaction terms included in Specification (2) were significant. The final results are in Specification (3) for Tables 5.15-5.20.

To summarize for the economy-wide results (Tables 5.15, 5.16 and 5.17):



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- For African-Americans, business formation rates are between 3.6 and 4.5 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Hispanics, business formation rates are between 2.2 percentage points and 5.1 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Asians, business formation rates are between 0.3 and 1.5 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Native Americans, business formation rates are between 0.3 and 3.4 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For non-minority women, business formation rates are between 2.5 percentage points lower and 0.3 percentage points higher than what would be expected in a race- and gender-neutral marketplace.

To summarize for the Construction and CRS sector results (Tables 5.18a, 5.19 and 5.20):

- For African-Americans, business formation rates are between 9.7 and 12.2 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Hispanics, business formation rates are between 7.4 percentage lower and 8.5 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Asians, business formation rates are between 4.2 and 7.9 percentage points lower than what would be expected in a race- and gender-neutral marketplace.
- For Native Americans, business formation rates are between 6.0 percentage points lower and 8.0 percentage points higher than what would be expected in a race- and gender-neutral marketplace.
- For non-minority women, business formation rates are between 8.5 and 12.1 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

### **c. Conclusions**

This section has demonstrated that observed MWBE availability levels in Augusta are substantially and statistically significantly lower in almost every case examined than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. This suggests that minorities and women are substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics including age, education, geographic location, industry, and trends over time. As demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable non-minority males whether they work as employees or as entrepreneurs.

#### **D. Expected Business Formation Rates—Implications for Current MWBE Availability<sup>148</sup>**

In Table 5.21, the Probit regression results from Tables 5.15, 5.18a, and 5.18b for the overall Augusta economy, the Augusta Construction and CRS sector, and the Augusta Services and Commodities sector, respectively, are combined with weighted average self-employment rates by race and sex from the 2000 PUMS (Tables 5.13 and 5.14) to determine the expected difference between baseline availability and expected availability in a race- and gender-neutral marketplace. These figures appear in column (2) of each panel in Table 5.21.

The business formation rate in Augusta for minorities and women in the Construction and CRS sector is 14.5 percent (see last row of Table 5.21, middle panel). According to the regression specification underlying Table 5.18a, however, that rate would be 24.8 percent, or 71.4 percent higher, in a race- and gender-neutral marketplace. Put differently, the disparity index of the actual business formation rate to the expected business formation rate is 58.4. Disparity indices are adverse and statistically significant for all groups examined.<sup>149</sup>

In Construction and CRS, the largest disparity observed is for Asians and Native Americans (0.0), followed in descending order by African-Americans (41.6), non-minority women (69.1), and Hispanics (72.4). For MWBEs as a group in the Augusta Construction and CRS sectors, the disparity index is 58.4.

In the Goods and Services sector, the largest disparity observed is for African-Americans (47.8), followed by Hispanics (54.8), Native Americans (68.4), Asians (82.1), and non-minority women (109.9). For MWBEs as a group in the Augusta Goods and Services sectors, the disparity index is 89.9.

Given the large disparities observed throughout Table 5.21, goal-setters may consider adjusting baseline estimates of MWBE availability upward to account for the continuing effects of discrimination. The business formation rate disparities documented in Table 5.21 can be combined with the estimates of current MWBE availability documented in Tables 4.17 and elsewhere to provide estimates of expected availability. These estimates appear below in Table 7.15. In every instance in Augusta except for non-minority women in Goods and Services industries, expected MWBE availability exceeds current MWBE availability.

#### **E. Evidence from the Survey of Business Owners**

As a final check on the statistical findings in this Chapter, we present evidence from a Census Bureau data collection effort dedicated to MWBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO), formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE), collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and

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<sup>148</sup> This exercise addresses the requirements of 49 CFR 26.45 ("Step 2") for the USDOT DBE Program.

<sup>149</sup> The disparity indices for persons reporting multiple races are slightly higher than 80.0 percent in two of the three panels of Table 5.21.

ethnic minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Censuses* program. Data from the 2002 SBO were just released in 2007.

The SBO estimates are created by matching data collected from income tax returns by the Internal Revenue Service with Social Security Administration data on race and ethnicity, and supplementing this information using statistical sampling methods. The unique field for conducting this matching is the Social Security Number (SSN) or the Employer Identification Number (EIN), as reported on the tax return.<sup>150</sup>

The SBO covers women and five groups of minorities—(1) African-Americans, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Pacific Islanders, and (5) American Indians and Alaskan Natives. The 2002 SBO also includes comparative information for non-minority-owned, non-women-owned firms.<sup>151</sup>

The SBO provides aggregate estimates of the number of minority-owned and women-owned firms and their annual sales and receipts. The SBO distinguishes employer firms from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Although compared to the PUMS or the CPS the SBO is more limited in the scope of industrial and geographic detail it provides, it nonetheless contains a wealth of information on the character of minority and female business enterprise in the U.S as a whole as well as in the States of Georgia and South Carolina. In the remainder of this section we present 2002 SBO statistics for the United States as a whole and the States of Georgia and South Carolina and calculate disparity indices from them. We find that results in the SBO regarding disparities are consistent with our findings above using the PUMS and the CPS.

Tables 5.22 and 5.23 contain data for all industries combined. Table 5.22 is for the US as a whole, Table 5.23 is for the States of Georgia and South Carolina combined. Panel A in these three tables summarizes the 2002 SBO results for each grouping. Panel A of Table 5.22, for example, shows that there were 22.48 million firms in the US in 2002 (column 1) with overall sales and receipts of \$8.784 trillion (column 2). Of these 22.48 million firms, 5.17 million had one or more employees (column 3) and these 5.17 million firms had overall sales and receipts of \$8.039 trillion (column 4). Column (5) shows a total of 55.37 million employees on the payroll of these 5.17 million firms and a total annual payroll expense of \$1.627 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for women-owned and minority-owned firms. For example, Table 5.22 shows that there were 1.2 million African-American-owned firms counted in 2002, and that these 1.2 million firms registered \$88.6 billion in sales

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<sup>150</sup> Prior to 2002, “C” corporations were not included in the SMWOBE universe due to technical difficulties. This has been rectified in the 2002 SBO. For more information, consult the discussion of SBO survey methodology at <http://www.census.gov/csd/sbo/intro2002SBO.htm>.

<sup>151</sup> In the PUMS and CPS data, discussed above, the unit of analysis was typically the business owner, or self-employed person. In the SBO data the unit of analysis is the business rather than the business owner. Furthermore, unlike most other business statistics, including the other components of the *Economic Censuses*, the unit of analysis in the SBO is the firm, rather than the establishment.

## Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

and receipts. It also shows that 94,518 of these African-American-owned firms had one or more employees, and that they employed a total of 753,978 workers in 2002 with an annual payroll total of \$17.55 billion.

Panel A of Table 5.23 provides comparable information for the States of Georgia and South Carolina combined. In 2002 the Census Bureau counted 273,026 female-owned firms in these two states,<sup>152</sup> 119,074 African-American-owned firms, 21,325 Hispanic-owned firms, 31,339 Asian- or Pacific Islander-owned firms, and 6,111 Native American-owned firms.

Panel B in each Table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 5.23 shows that African-American-owned firms were 12.63 percent of all firms in these two states in 2002, and that female-owned firms were 28.95 percent of all firms in these states. Additionally, 2.26 percent of firms were Hispanic-owned, 3.32 percent were Asian- or Pacific Islander-owned and 0.65 percent were Native American-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 5.23, for example, shows that although African-American-owned firms were 12.63 percent of all firms in these two states, they accounted for only 2.05 percent of all sales and receipts. Similar results are obtained when the sample is restricted to firms with one or more paid employees. Column (3) in Table 5.23 shows that African-American-owned employer firms accounted for 4.01 percent of all firms but only 1.53 percent of all sales and receipts. Large disparities in Georgia and South Carolina are observed not only for African-Americans, but also for female-owned firms, Hispanic-owned firms, Asian-owned firms, and Native American-owned firms.

The disparity indices are presented in Panel C of each Table. Disparity indices of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms (0 percent being perfect disparity and 100 percent being full parity). In Georgia and South Carolina, disparity indices fall beneath the 80 percent threshold in almost all cases. The most severe disparities are observed for African-American-owned firms.

Tables 5.24 and 5.25 show comparable SBO data for Construction and CRS (NAICS 23 and 54), while Tables 5.26 and 5.27 show data for Goods and Services (Balance of NAICS codes). Disparity indices in Augusta are again large and statistically significant in almost every case.

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<sup>152</sup> Additionally 92,899 equally male/female-owned firms were counted.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

## Tables

**Table 5.1. Annual Wage Earnings Regressions, All Industries, 2000**

| Independent Variables            | Specification      |                    |                    |
|----------------------------------|--------------------|--------------------|--------------------|
|                                  | (1)                | (2)                | (3)                |
| African-American                 | -0.296<br>(182.01) | -0.296<br>(181.74) | -0.296<br>(181.79) |
| Hispanic                         | -0.213<br>(130.92) | -0.213<br>(130.66) | -0.213<br>(130.67) |
| Asian                            | -0.289<br>(132.37) | -0.289<br>(131.95) | -0.289<br>(132.30) |
| Native American                  | -0.325<br>(67.18)  | -0.324<br>(66.58)  | -0.324<br>(66.58)  |
| Other Race                       | -0.281<br>(85.99)  | -0.281<br>(85.67)  | -0.281<br>(85.98)  |
| Non-minority Female              | -0.358<br>(388.07) | -0.357<br>(385.59) | -0.357<br>(385.65) |
| Age                              | 0.178<br>(654.7)   | 0.178<br>(654.65)  | 0.178<br>(654.65)  |
| Age <sup>2</sup>                 | -0.002<br>(565.31) | -0.002<br>(565.27) | -0.002<br>(565.27) |
| Augusta                          | -0.065<br>(5.10)   | -0.065<br>(5.10)   | -0.065<br>(5.01)   |
| Augusta*African-American         |                    | 0.071<br>(0.93)    |                    |
| Augusta*Hispanic                 |                    | 0.059<br>(2.84)    | 0.058<br>(2.85)    |
| Augusta* Asian/Pacific Islanders |                    | -0.013<br>(0.38)   |                    |
| Augusta* Native American         |                    | -0.109<br>(2.11)   | -0.109<br>(2.11)   |
| Augusta*Other Race               |                    | -0.000<br>(0.00)   |                    |
| Augusta*non-minority Female      |                    | -0.094<br>(9.46)   | -0.094<br>(9.61)   |
| Education (16 categories)        | Yes                | Yes                | Yes                |
| Geography (51 categories)        | Yes                | Yes                | Yes                |
| Industry (88 categories)         | Yes                | Yes                | Yes                |
| N                                | 3510329            | 3510329            | 3510329            |
| R <sup>2</sup>                   | .4412              | .4413              | .4413              |

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual wages between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.2. Annual Wage Earnings Regressions, All Industries, 1980-1991**

| Independent Variables       | Specification      |                    |                    |
|-----------------------------|--------------------|--------------------|--------------------|
|                             | (1)                | (2)                | (3)                |
| African-American            | -0.302<br>(82.21)  | -0.302<br>(82.21)  | -0.302<br>(82.21)  |
| Hispanic                    | -0.204<br>(57.59)  | -0.204<br>(57.59)  | -0.204<br>(57.59)  |
| Other Race                  | -0.126<br>(15.59)  | -0.126<br>(15.59)  | -0.126<br>(15.59)  |
| Non-minority Female         | -0.283<br>(127.01) | -0.283<br>(127.01) | -0.283<br>(127.01) |
| Age                         | 0.099<br>(150.26)  | 0.099<br>(150.26)  | 0.099<br>(150.26)  |
| Age <sup>2</sup>            | -0.001<br>(124.39) | -0.001<br>(124.39) | -0.001<br>(124.39) |
| Augusta                     |                    |                    |                    |
| Augusta*African-American    |                    |                    |                    |
| Augusta*Hispanic            |                    |                    |                    |
| Augusta*Other Race          |                    |                    |                    |
| Augusta*non-minority Female |                    |                    |                    |
| Time (13 categories)        | Yes                | Yes                | Yes                |
| Education (16 categories)   | Yes                | Yes                | Yes                |
| Geography (51 categories)   | Yes                | Yes                | Yes                |
| Industry (88 categories)    | Yes                | Yes                | Yes                |
| N                           | 689172             | 689172             | 689172             |
| R <sup>2</sup>              | .6349              | .6349              | .6349              |

Source: NERA calculations from the Annual Demographic File of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; (2) Reported number is the percentage difference in annual wages between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.3. Annual Wage Earnings Regressions, All Industries, 1992-2008**

| Independent Variables       | Specification      |                    |                    |
|-----------------------------|--------------------|--------------------|--------------------|
|                             | (1)                | (2)                | (3)                |
| African-American            | -0.280<br>(93.97)  | -0.280<br>(93.92)  | -0.280<br>(93.97)  |
| Hispanic                    | -0.197<br>(70.58)  | -0.197<br>(70.57)  | -0.197<br>(70.58)  |
| Asian                       | -0.217<br>(48.9)   | -0.217<br>(48.89)  | -0.217<br>(48.90)  |
| Native American             | -0.234<br>(27.83)  | -0.234<br>(27.83)  | -0.234<br>(27.83)  |
| Non-minority Female         | -0.217<br>(104.90) | -0.217<br>(104.88) | -0.217<br>(104.90) |
| Age                         | 0.095<br>(165.20)  | 0.095<br>(165.20)  | 0.095<br>(165.20)  |
| Age <sup>2</sup>            | -0.001<br>(139.36) | -0.001<br>(139.37) | -0.001<br>(139.36) |
| Augusta                     | -0.030<br>(0.62)   | 0.001<br>(0.01)    | -0.030<br>(0.61)   |
| Augusta*African-American    |                    | -0.028<br>(0.28)   |                    |
| Augusta*Hispanic            |                    | 0.265<br>(1.17)    |                    |
| Augusta*Asian               |                    | -0.495<br>(10.02)  | -0.479<br>(12.86)  |
| Augusta*Native American     |                    | 1.074<br>(10.71)   | 1.139<br>(15.04)   |
| Augusta*non-minority Female |                    | -0.076<br>(0.61)   |                    |
| Time (11 categories)        | Yes                | Yes                | Yes                |
| Education (16 categories)   | Yes                | Yes                | Yes                |
| Geography (51 categories)   | Yes                | Yes                | Yes                |
| Industry (88 categories)    | Yes                | Yes                | Yes                |
| N                           | 1054627            | 1054627            | 1054627            |
| R <sup>2</sup>              | .5953              | .5954              | .5954              |

Source: NERA calculations from the Annual Demographic File of the 1992-2008 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; (2) Reported number is the percentage difference in annual wages between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.4. Annual Wage Earnings Regressions, Construction and Related Industries, 2000**

| Independent Variables            | Specification      |                    |                    |
|----------------------------------|--------------------|--------------------|--------------------|
|                                  | (1)                | (2)                | (3)                |
| African-American                 | -0.324<br>(48.31)  | -0.324<br>(48.26)  | -0.324<br>(48.27)  |
| Hispanic                         | -0.155<br>(30.11)  | -0.156<br>(30.05)  | -0.155<br>(30.10)  |
| Asian                            | -0.193<br>(17.16)  | -0.194<br>(17.18)  | -0.193<br>(17.13)  |
| Native American                  | -0.293<br>(21.61)  | -0.291<br>(21.2)   | -0.293<br>(21.62)  |
| Other Race                       | -0.211<br>(17.79)  | -0.209<br>(17.58)  | -0.210<br>(17.78)  |
| Non-minority Female              | -0.399<br>(103.00) | -0.398<br>(101.94) | -0.398<br>(101.95) |
| Age                              | 0.158<br>(169.31)  | 0.158<br>(169.30)  | 0.158<br>(169.31)  |
| Age <sup>2</sup>                 | -0.002<br>(144.01) | -0.002<br>(144.01) | -0.002<br>(144.02) |
| Augusta                          | 0.016<br>(0.41)    | 0.016<br>(0.41)    | 0.016<br>(0.41)    |
| Augusta*African-American         |                    | 0.051<br>(0.17)    |                    |
| Augusta*Hispanic                 |                    | 0.045<br>(0.88)    |                    |
| Augusta* Asian/Pacific Islanders |                    | 0.277<br>(1.35)    |                    |
| Augusta* Native American         |                    | -0.137<br>(1.31)   |                    |
| Augusta*Other Race               |                    | -0.189<br>(1.43)   |                    |
| Augusta*non-minority Female      |                    | -0.211<br>(5.02)   | -0.212<br>(5.09)   |
| Education (16 categories)        | Yes                | Yes                | Yes                |
| Geography (51 categories)        | Yes                | Yes                | Yes                |
| Industry (88 categories)         | Yes                | Yes                | Yes                |
| N                                | 280323             | 280323             | 280323             |
| R <sup>2</sup>                   | .2756              | .2757              | .2756              |

Source and Notes: See Table 5.1.



# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.5. Annual Wage Earnings Regressions, Construction and Related Industries, 1980-1991**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.352<br>(21.84) | -0.352<br>(21.84) | -0.352<br>(21.84) |
| Hispanic                    | -0.157<br>(12.24) | -0.157<br>(12.24) | -0.157<br>(12.24) |
| Other Race                  | -0.128<br>(3.82)  | -0.128<br>(3.82)  | -0.128<br>(3.82)  |
| Non-minority Female         | -0.302<br>(25.14) | -0.302<br>(25.14) | -0.302<br>(25.14) |
| Age                         | 0.122<br>(48.54)  | 0.122<br>(48.54)  | 0.122<br>(48.54)  |
| Age <sup>2</sup>            | -0.001<br>(40.01) | -0.001<br>(40.01) | -0.001<br>(40.01) |
| Augusta                     |                   |                   |                   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Other Race          |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (13 categories)        | Yes               | Yes               | Yes               |
| Education (16 categories)   | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (88 categories)    | Yes               | Yes               | Yes               |
| N                           | 49976             | 49976             | 49976             |
| R <sup>2</sup>              | .5524             | .5524             | .5524             |

Source: See Table 5.2.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.6. Annual Wage Earnings Regressions, Construction and Related Industries, 1992-2008**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.242<br>(18.54) | -0.242<br>(18.53) | -0.242<br>(18.54) |
| Hispanic                    | -0.167<br>(19.39) | -0.167<br>(19.4)  | -0.167<br>(19.39) |
| Asian                       | -0.183<br>(9.18)  | -0.183<br>(9.18)  | -0.183<br>(9.18)  |
| Native American             | -0.156<br>(6.79)  | -0.156<br>(6.79)  | -0.156<br>(6.79)  |
| Non-minority Female         | -0.207<br>(20.51) | -0.207<br>(20.52) | -0.207<br>(20.51) |
| Age                         | 0.098<br>(48.99)  | 0.098<br>(48.99)  | 0.098<br>(48.99)  |
| Age <sup>2</sup>            | -0.001<br>(40.85) | -0.001<br>(40.85) | -0.001<br>(40.85) |
| Augusta                     | 0.004<br>(0.03)   | -0.022<br>(0.15)  | 0.004<br>(0.03)   |
| Augusta*African-American    |                   | -0.099<br>(.54)   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Asian               |                   |                   |                   |
| Augusta*Native American     |                   |                   |                   |
| Augusta*non-minority Female |                   | 0.431<br>(1.43)   |                   |
| Time (11 categories)        | Yes               | Yes               | Yes               |
| Education (16 categories)   | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (88 categories)    | Yes               | Yes               | Yes               |
| N                           | 60581             | 60581             | 60581             |
| R <sup>2</sup>              | .3729             | .3729             | .3729             |

Source: See Table 5.3.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.7. Annual Business Owner Earnings Regressions, All Industries, 2000**

| Independent Variables            | Specification     |                   |                   |
|----------------------------------|-------------------|-------------------|-------------------|
|                                  | (1)               | (2)               | (3)               |
| African-American                 | -0.280<br>(22.23) | -0.279<br>(22.19) | -0.279<br>(22.20) |
| Hispanic                         | -0.186<br>(17.02) | -0.186<br>(16.95) | -0.186<br>(17.01) |
| Asian                            | -0.035<br>(2.30)  | -0.036<br>(2.32)  | -0.035<br>(2.28)  |
| Native American                  | -0.380<br>(13.45) | -0.381<br>(13.45) | -0.380<br>(13.45) |
| Other Race                       | -0.261<br>(13.43) | -0.261<br>(13.37) | -0.261<br>(13.42) |
| Non-minority Female              | -0.437<br>(83.89) | -0.436<br>(83.34) | -0.436<br>(83.35) |
| Age                              | 0.165<br>(91.67)  | 0.165<br>(91.66)  | 0.165<br>(91.66)  |
| Age <sup>2</sup>                 | -0.002<br>(81.88) | -0.002<br>(81.87) | -0.002<br>(81.87) |
| Augusta                          | -0.071<br>(0.86)  | -0.071<br>(0.86)  | -0.071<br>(0.86)  |
| Augusta*African-American         |                   | -0.028<br>(0.05)  |                   |
| Augusta*Hispanic                 |                   | -0.046<br>(0.28)  |                   |
| Augusta* Asian/Pacific Islanders |                   | 0.236<br>(0.87)   |                   |
| Augusta* Native American         |                   | 0.258<br>(0.59)   |                   |
| Augusta*Other Race               |                   | -0.062<br>(0.21)  |                   |
| Augusta*non-minority Female      |                   | -0.146<br>(2.71)  | -0.148<br>(2.81)  |
| Education (16 categories)        | Yes               | Yes               | Yes               |
| Geography (51 categories)        | Yes               | Yes               | Yes               |
| Industry (88 categories)         | Yes               | Yes               | Yes               |
| N                                | 350756            | 350756            | 350756            |
| R <sup>2</sup>                   | .1696             | .1696             | .1696             |

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Notes: (1) Universe is all persons in the private sector with positive business earnings between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.8. Annual Business Owner Earnings Regressions, All Industries, 1980-1991**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.336<br>(15.34) | -0.336<br>(15.34) | -0.336<br>(15.34) |
| Hispanic                    | -0.199<br>(13.03) | -0.199<br>(13.03) | -0.199<br>(13.03) |
| Other Race                  | -0.090<br>(3.05)  | -0.090<br>(3.05)  | -0.090<br>(3.05)  |
| Non-minority Female         | -0.457<br>(48.63) | -0.457<br>(48.63) | -0.457<br>(48.63) |
| Age                         | 0.101<br>(32.82)  | 0.101<br>(32.82)  | 0.101<br>(32.82)  |
| Age <sup>2</sup>            | -0.001<br>(29.46) | -0.001<br>(29.46) | -0.001<br>(29.46) |
| Augusta                     |                   |                   |                   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Other Race          |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (13 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 74895             | 74895             | 74895             |
| R <sup>2</sup>              | .5172             | .5172             | .5172             |

Source: NERA calculations from the Annual Demographic File of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector incorporated and unincorporated self-employed with positive business earnings between age 16 and 64; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.9. Annual Business Owner Earnings Regressions, All Industries, 1992-2008**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.280<br>(16.30) | -0.280<br>(16.31) | -0.280<br>(16.30) |
| Hispanic                    | -0.248<br>(19.19) | -0.248<br>(19.19) | -0.248<br>(19.19) |
| Asian                       | -0.214<br>(12.80) | -0.214<br>(12.80) | -0.214<br>(12.80) |
| Native American             | -0.282<br>(8.14)  | -0.282<br>(8.14)  | -0.282<br>(8.14)  |
| Non-minority Female         | -0.378<br>(43.13) | -0.378<br>(43.1)  | -0.378<br>(43.13) |
| Age                         | 0.097<br>(30.47)  | 0.097<br>(30.47)  | 0.097<br>(30.47)  |
| Age <sup>2</sup>            | -0.001<br>(28.46) | -0.001<br>(28.47) | -0.001<br>(28.46) |
| Augusta                     | -0.168<br>(0.85)  | -0.075<br>(0.27)  | -0.168<br>(0.85)  |
| Augusta*African-American    |                   | 0.317<br>(0.8)    |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Asian               |                   | 0.617<br>(1.67)   |                   |
| Augusta*Native American     |                   |                   |                   |
| Augusta*non-minority Female |                   | -0.450<br>(0.97)  |                   |
| Time (11 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 115869            | 115869            | 115869            |
| R <sup>2</sup>              | .3823             | .3824             | .3824             |

Source: NERA calculations from the Annual Demographic File of the 1992-2002 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector incorporated and unincorporated self-employed with positive business earnings between age 16 and 64; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.10. Business Owner Earnings Regressions, Construction and Related Industries, 2000**

| Independent Variables            | Specification     |                   |                   |
|----------------------------------|-------------------|-------------------|-------------------|
|                                  | (1)               | (2)               | (3)               |
| African-American                 | -0.288<br>(8.97)  | -0.288<br>(8.96)  | -0.288<br>(8.97)  |
| Hispanic                         | -0.143<br>(6.18)  | -0.144<br>(6.17)  | -0.143<br>(6.18)  |
| Asian/Pacific Islanders          | -0.055<br>(1.08)  | -0.057<br>(1.13)  | -0.055<br>(1.08)  |
| Native American                  | -0.368<br>(6.80)  | -0.366<br>(6.73)  | -0.368<br>(6.80)  |
| Other Race                       | -0.138<br>(2.95)  | -0.133<br>(2.83)  | -0.138<br>(2.95)  |
| Non-minority Female              | -0.512<br>(29.38) | -0.511<br>(29.14) | -0.512<br>(29.38) |
| Age                              | 0.140<br>(34.49)  | 0.140<br>(34.47)  | 0.140<br>(34.49)  |
| Age <sup>2</sup>                 | -0.001<br>(32.16) | -0.001<br>(32.15) | -0.001<br>(32.16) |
| Augusta                          | -0.303<br>(2.22)  | -0.303<br>(2.22)  | -0.303<br>(2.22)  |
| Augusta*African-American         |                   |                   |                   |
| Augusta*Hispanic                 |                   | 0.058<br>(0.17)   |                   |
| Augusta* Asian/Pacific Islanders |                   | 1.025<br>(0.89)   |                   |
| Augusta* Native American         |                   | -0.369<br>(0.58)  |                   |
| Augusta*Other Race               |                   | -0.669<br>(1.61)  |                   |
| Augusta*non-minority Female      |                   | -0.245<br>(1.10)  |                   |
| Education (16 categories)        | Yes               | Yes               | Yes               |
| Geography (51 categories)        | Yes               | Yes               | Yes               |
| Industry (88 categories)         | Yes               | Yes               | Yes               |
| N                                | 56589             | 56589             | 56589             |
| R <sup>2</sup>                   | .0558             | .0559             | .0558             |

Source and Notes: See Table 5.7.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.11. Business Owner Earnings Regressions, Construction and Related Industries, 1980-1991**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.396<br>(8.74)  | -0.396<br>(8.74)  | -0.396<br>(8.74)  |
| Hispanic                    | -0.160<br>(4.62)  | -0.160<br>(4.62)  | -0.160<br>(4.62)  |
| Other Race                  | -0.004<br>(0.06)  | -0.004<br>(0.06)  | -0.004<br>(0.06)  |
| Non-minority Female         | -0.382<br>(9.16)  | -0.382<br>(9.16)  | -0.382<br>(9.16)  |
| Age                         | 0.106<br>(15.85)  | 0.106<br>(15.85)  | 0.106<br>(15.85)  |
| Age <sup>2</sup>            | -0.001<br>(14.26) | -0.001<br>(14.26) | -0.001<br>(14.26) |
| Augusta                     |                   |                   |                   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Other Race          |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (13 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 13171             | 13171             | 13171             |
| R <sup>2</sup>              | .3322             | .3322             | .3322             |

Source and Notes: See Table 5.8.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.12. Business Owner Earnings Regressions, Construction and Related Industries, 1992-2008**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.233<br>(5.57)  | -0.233<br>(5.57)  | -0.233<br>(5.57)  |
| Hispanic                    | -0.160<br>(6.09)  | -0.160<br>(6.09)  | -0.160<br>(6.09)  |
| Asian                       | -0.130<br>(2.25)  | -0.130<br>(2.25)  | -0.130<br>(2.25)  |
| Native American             | -0.129<br>(1.91)  | -0.129<br>(1.91)  | -0.129<br>(1.91)  |
| Non-minority Female         | -0.224<br>(6.99)  | -0.224<br>(6.99)  | -0.224<br>(6.99)  |
| Age                         | 0.073<br>(11.29)  | 0.073<br>(11.29)  | 0.073<br>(11.29)  |
| Age <sup>2</sup>            | -0.001<br>(10.23) | -0.001<br>(10.23) | -0.001<br>(10.23) |
| Augusta                     | -0.461<br>(0.92)  | -0.461<br>(0.92)  | -0.461<br>(0.92)  |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Asian               |                   |                   |                   |
| Augusta*Native American     |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (11 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 22992             | 22992             | 22992             |
| R <sup>2</sup>              | .2525             | .2525             | .2525             |

Source and Notes: See Table 5.9.



# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.13. Self-Employment Rates in 2000 for Selected Race and Sex Groups: United States and the Augusta MSA, All Industries**

| Race/Sex            | U.S.<br>(%) | Augusta MSA<br>(%) | Percent<br>Difference from<br>Non-minority<br>male (Augusta<br>MSA) |
|---------------------|-------------|--------------------|---|
| African-American    | 4.75        | 3.53               | -67.5%  |
| Hispanic            | 6.81        | 9.12               | -15.9%  |
| Asian               | 9.84        | 18.77              | 73.0%   |
| Native American     | 7.72        | 6.42               | -40.8%  |
| Multiple Races      | 8.87        | 12.77              | 17.7%   |
| Non-minority female | 7.91        | 7.72               | -28.8%  |
| MWBE                | 7.45        | 6.46               | -40.5%  |
| Non-minority male   | 13.12       | 10.85              |   |

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

**Table 5.14. Self-Employment Rates in 2000 for Selected Race and Sex Groups: United States and the Augusta MSA, Construction and CRS Sectors and Goods and Services Sectors**

| Race/Sex                            | U.S.<br>(%) | Augusta MSA<br>(%) | Percent<br>Difference from<br>Non-minority<br>male (Augusta<br>MSA) |
|-------------------------------------|-------------|--------------------|---|
| <i>Construction and CRS Sectors</i> |             |                    |   |
| African-American                    | 13.98       | 6.85               | -63.3%  |
| Hispanic                            | 12.18       | 36.69              | 96.6%   |
| Asian                               | 15.98       | 0.00               | -100.0%   |
| Native American                     | 15.29       | 0.00               | -100.0%   |
| Multiple Races                      | 19.64       | 10.78              | -42.2%  |
| Non-minority female                 | 14.21       | 18.97              | 1.7%  |
| MWBE                                | 13.71       | 14.47              | -22.5%  |
| Non-minority male                   | 24.33       | 18.66              |   |
| <i>Goods and Services Sectors</i>   |             |                    |   |
| African-American                    | 4.30        | 3.37               | -62.8%  |
| Hispanic                            | 6.19        | 5.81               | -35.8%  |
| Asian                               | 9.61        | 20.06              | 121.7%  |
| Native American                     | 6.71        | 7.00               | -22.7%  |
| Multiple Races                      | 7.99        | 13.20              | 45.9%   |
| Non-minority female                 | 7.75        | 7.21               | -20.3%  |
| MWBE                                | 7.16        | 6.04               | -33.3%  |
| Non-minority male                   | 11.29       | 9.05               |   |

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.15. Business Formation Regressions, All Industries, 2000**

| Independent Variables            | Specification      |                    |                    |
|----------------------------------|--------------------|--------------------|--------------------|
|                                  | (1)                | (2)                | (3)                |
| African-American                 | -0.045<br>(99.33)  | -0.045<br>(99.41)  | -0.045<br>(99.45)  |
| Hispanic                         | -0.035<br>(80.87)  | -0.035<br>(80.56)  | -0.035<br>(80.57)  |
| Asian/Pacific Islanders          | -0.015<br>(24.3)   | -0.015<br>(24.28)  | -0.015<br>(24.37)  |
| Native American                  | -0.034<br>(26.47)  | -0.033<br>(26.19)  | -0.034<br>(26.45)  |
| Other Race                       | -0.018<br>(19.17)  | -0.018<br>(19.14)  | -0.018<br>(19.19)  |
| Non-minority Female              | -0.029<br>(101.53) | -0.029<br>(101.97) | -0.029<br>(102.00) |
| Age                              | 0.010<br>(143.27)  | 0.010<br>(143.29)  | 0.010<br>(143.29)  |
| Age <sup>2</sup>                 | -0.000<br>(101.45) | -0.000<br>(101.46) | -0.000<br>(101.46) |
| Augusta                          | -0.009<br>(2.57)   | -0.009<br>(2.57)   | -0.009<br>(2.57)   |
| Augusta*African-American         |                    | -0.004<br>(0.16)   |                    |
| Augusta*Hispanic                 |                    | -0.016<br>(2.61)   | -0.016<br>(2.55)   |
| Augusta* Asian/Pacific Islanders |                    | -0.007<br>(0.69)   |                    |
| Augusta* Native American         |                    | -0.020<br>(1.36)   |                    |
| Augusta*Other Race               |                    | 0.002<br>(0.17)    |                    |
| Augusta*non-minority Female      |                    | 0.031<br>(9.79)    | 0.032<br>(10.08)   |
| Education (16 categories)        | Yes                | Yes                | Yes                |
| Geography (51 categories)        | Yes                | Yes                | Yes                |
| Industry (25 categories)         | Yes                | Yes                | Yes                |
| N                                | 4032101            | 4032101            | 4032101            |
| Pseudo R <sup>2</sup>            | .1582              | .1582              | .1582              |

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.16. Business Formation Regressions, All Industries, 1980-1991**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.037<br>(50.56) | -0.037<br>(50.56) | -0.037<br>(50.56) |
| Hispanic                    | -0.022<br>(31.34) | -0.022<br>(31.34) | -0.022<br>(31.34) |
| Other Race                  | -0.003<br>(1.76)  | -0.003<br>(1.76)  | -0.003<br>(1.76)  |
| Non-minority Female         | -0.033<br>(62.15) | -0.033<br>(62.15) | -0.033<br>(62.15) |
| Age                         | 0.012<br>(91.00)  | 0.012<br>(91.00)  | 0.012<br>(91.00)  |
| Age <sup>2</sup>            | -0.000<br>(71.53) | -0.000<br>(71.53) | -0.000<br>(71.53) |
| Augusta                     |                   |                   |                   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Other Race          |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (6 categories)         | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 770337            | 770377            | 770377            |
| Pseudo R <sup>2</sup>       | .2529             | .2529             | .2529             |

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.17. Business Formation Regressions, All Industries, 1992-2008**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.036<br>(48.26) | -0.036<br>(48.26) | -0.036<br>(48.25) |
| Hispanic                    | -0.028<br>(41.22) | -0.028<br>(41.21) | -0.028<br>(41.21) |
| Asian                       | -0.010<br>(9.22)  | -0.010<br>(9.23)  | -0.010<br>(9.23)  |
| Native American             | -0.021<br>(10.95) | -0.021<br>(10.94) | -0.021<br>(10.94) |
| Non-minority Female         | -0.025<br>(46.26) | -0.025<br>(46.26) | -0.025<br>(46.26) |
| Age                         | 0.012<br>(85.75)  | 0.012<br>(85.75)  | 0.012<br>(85.75)  |
| Age <sup>2</sup>            | -0.000<br>(64.31) | -0.000<br>(64.31) | -0.000<br>(64.31) |
| Augusta                     | -0.004<br>(0.28)  | -0.008<br>(0.44)  | -0.004<br>(0.31)  |
| Augusta*African-American    |                   | 0.024<br>(0.56)   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Asian               |                   | 0.363<br>(2.19)   | 0.347<br>(2.17)   |
| Augusta*Native American     |                   |                   |                   |
| Augusta*non-minority Female |                   | 0.002<br>(0.07)   |                   |
| Time (11 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 1177892           | 1177887           | 1177887           |
| Pseudo R <sup>2</sup>       | .2089             | .2089             | .2089             |

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1992-2002 Current Population.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.18a. Business Formation Regressions, Construction and Related Industries, 2000**

| Independent Variables            | Specification     |                   |                   |
|----------------------------------|-------------------|-------------------|-------------------|
|                                  | (1)               | (2)               | (3)               |
| African-American                 | -0.097<br>(30.19) | -0.097<br>(30.18) | -0.097<br>(30.18) |
| Hispanic                         | -0.076<br>(31.07) | -0.076<br>(30.77) | -0.076<br>(30.78) |
| Asian/Pacific Islanders          | -0.057<br>(10.5)  | -0.057<br>(10.43) | -0.057<br>(10.49) |
| Native American                  | -0.080<br>(12.13) | -0.078<br>(11.81) | -0.080<br>(12.13) |
| Other Race                       | -0.031<br>(5.45)  | -0.030<br>(5.41)  | -0.031<br>(5.44)  |
| Non-minority Female              | -0.085<br>(39.98) | -0.085<br>(39.87) | -0.085<br>(39.98) |
| Age                              | 0.025<br>(60.06)  | 0.025<br>(60.07)  | 0.025<br>(60.07)  |
| Age <sup>2</sup>                 | -0.000<br>(44.03) | -0.000<br>(44.04) | -0.000<br>(44.04) |
| Augusta                          | -0.063<br>(3.89)  | -0.063<br>(3.89)  | -0.063<br>(3.89)  |
| Augusta*African-American         |                   | 0.052<br>(0.39)   |                   |
| Augusta*Hispanic                 |                   | -0.064<br>(2.33)  | -0.064<br>(2.35)  |
| Augusta* Asian/Pacific Islanders |                   | -0.052<br>(0.61)  |                   |
| Augusta* Native American         |                   | -0.114<br>(1.90)  |                   |
| Augusta*Other Race               |                   | -0.012<br>(0.18)  |                   |
| Augusta*non-minority Female      |                   | 0.026<br>(1.05)   |                   |
| Education (16 categories)        | Yes               | Yes               | Yes               |
| Geography (51 categories)        | Yes               | Yes               | Yes               |
| Industry (25 categories)         | Yes               | Yes               | Yes               |
| N                                | 343116            | 343116            | 343116            |
| Pseudo R <sup>2</sup>            | .0753             | .0754             | .0753             |

Source and Notes: See Table 5.15.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.18b. Business Formation Regressions, Goods and Services Industries, 2000**

| Independent Variables            | Specification     |                   |                   |
|----------------------------------|-------------------|-------------------|-------------------|
|                                  | (1)               | (2)               | (3)               |
| African-American                 | -0.047<br>(93.51) | -0.047<br>(93.62) | -0.047<br>(93.65) |
| Hispanic                         | -0.034<br>(68.55) | -0.034<br>(68.28) | -0.034<br>(68.3)  |
| Asian/Pacific Islanders          | -0.021<br>(32.84) | -0.021<br>(32.77) | -0.021<br>(32.9)  |
| Native American                  | -0.031<br>(20.31) | -0.031<br>(20.19) | -0.031<br>(20.3)  |
| Other Race                       | -0.017<br>(16.56) | -0.017<br>(16.56) | -0.017<br>(16.58) |
| Non-minority Female              | -0.026<br>(87.11) | -0.026<br>(87.60) | -0.026<br>(87.63) |
| Age                              | 0.009<br>(117.49) | 0.009<br>(117.53) | 0.009<br>(117.53) |
| Age <sup>2</sup>                 | -0.000<br>(79.32) | -0.000<br>(79.35) | -0.000<br>(79.35) |
| Augusta                          | -0.008<br>(2.01)  | -0.008<br>(2.01)  | -0.008<br>(2.01)  |
| Augusta*African-American         |                   | -0.005<br>(0.17)  |                   |
| Augusta*Hispanic                 |                   | -0.018<br>(2.52)  | -0.017<br>(2.48)  |
| Augusta* Asian/Pacific Islanders |                   | -0.012<br>(1.09)  |                   |
| Augusta* Native American         |                   | -0.003<br>(0.17)  |                   |
| Augusta*Other Race               |                   | 0.007<br>(0.51)   |                   |
| Augusta*non-minority Female      |                   | 0.033<br>(9.36)   | 0.033<br>(9.63)   |
| Education (16 categories)        | Yes               | Yes               | Yes               |
| Geography (51 categories)        | Yes               | Yes               | Yes               |
| Industry (25 categories)         | Yes               | Yes               | Yes               |
| N                                | 3721681           | 3721681           | 3721681           |
| Pseudo R <sup>2</sup>            | .0738             | .0738             | .0738             |

Source: See Table 5.15.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.19. Business Formation Regressions, Construction and Related Industries, 1980-1991**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.122<br>(16.93) | -0.122<br>(16.93) | -0.122<br>(16.93) |
| Hispanic                    | -0.074<br>(12.17) | -0.074<br>(12.17) | -0.074<br>(12.17) |
| Other Race                  | -0.079<br>(5.10)  | -0.079<br>(5.10)  | -0.079<br>(5.10)  |
| Non-minority Female         | -0.121<br>(21.33) | -0.121<br>(21.33) | -0.121<br>(21.33) |
| Age                         | 0.037<br>(36.26)  | 0.037<br>(36.26)  | 0.037<br>(36.26)  |
| Age <sup>2</sup>            | -0.000<br>(28.97) | -0.000<br>(28.97) | -0.000<br>(28.97) |
| Augusta                     |                   |                   |                   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Other Race          |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (6 categories)         | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 63877             | 63877             | 63877             |
| Pseudo R <sup>2</sup>       | .1078             | .1078             | .1078             |

Source: See Table 5.16.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.20. Business Formation Regressions, Construction and Related Industries, 1992-2008**

| Independent Variables       | Specification     |                   |                   |
|-----------------------------|-------------------|-------------------|-------------------|
|                             | (1)               | (2)               | (3)               |
| African-American            | -0.099<br>(16.23) | -0.099<br>(16.21) | -0.099<br>(16.21) |
| Hispanic                    | -0.085<br>(19.54) | -0.085<br>(19.53) | -0.085<br>(19.53) |
| Asian                       | -0.042<br>(3.98)  | -0.042<br>(3.98)  | -0.042<br>(3.98)  |
| Native American             | -0.060<br>(4.97)  | -0.060<br>(4.97)  | -0.060<br>(4.97)  |
| Non-minority Female         | -0.087<br>(18.63) | -0.087<br>(18.60) | -0.087<br>(18.60) |
| Age                         | 0.032<br>(35.03)  | 0.032<br>(35.03)  | 0.032<br>(35.03)  |
| Age <sup>2</sup>            | -0.000<br>(26.86) | -0.000<br>(26.86) | -0.000<br>(26.86) |
| Augusta                     | -0.027<br>(0.37)  | 0.005<br>(0.06)   | 0.005<br>(0.06)   |
| Augusta*African-American    |                   |                   |                   |
| Augusta*Hispanic            |                   |                   |                   |
| Augusta*Asian               |                   |                   |                   |
| Augusta*Native American     |                   |                   |                   |
| Augusta*non-minority Female |                   |                   |                   |
| Time (11 categories)        | Yes               | Yes               | Yes               |
| Education (continuous)      | Yes               | Yes               | Yes               |
| Geography (51 categories)   | Yes               | Yes               | Yes               |
| Industry (49 categories)    | Yes               | Yes               | Yes               |
| N                           | 107440            | 107435            | 107435            |
| Pseudo R <sup>2</sup>       | .0955             | .0955             | .0955             |

Source: See Table 5.17.



# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.21. Actual and Potential Business Formation Rates in the Augusta MSA**

| Race/Sex                | Business Formation Rate (%) | Expected Business Formation Rate (%) | Disparity Index |
|-------------------------|-----------------------------|--------------------------------------|-----------------|
| <i>All Industries</i>   | (1)                         | (2)                                  | (3)             |
| African-American        | 3.53                        | 8.0                                  | 44.0            |
| Hispanic                | 9.12                        | 14.2                                 | 64.1            |
| Asian                   | 18.77                       | 20.3                                 | 92.6            |
| Native American         | 6.42                        | 9.8                                  | 65.4            |
| Multiple races reported | 12.77                       | 14.6                                 | 87.6            |
| Non-minority female     | 7.72                        | 7.4                                  | 104.0           |
| All MWBE                | 6.46                        | 7.5                                  | 86.6            |

|                                     |       |      |      |
|-------------------------------------|-------|------|------|
| <i>Construction and CRS Sectors</i> | (1)   | (2)  | (3)  |
| African-American                    | 6.85  | 16.6 | 41.4 |
| Hispanic                            | 36.69 | 50.7 | 72.4 |
| Asian                               | 0.00  | 5.7  | 0.0  |
| Native American                     | 0.00  | 8.0  | 0.0  |
| Multiple races reported             | 10.78 | 13.9 | 77.7 |
| Non-minority female                 | 18.97 | 27.5 | 69.1 |
| All MWBE                            | 14.47 | 24.8 | 58.4 |

|                                   |      |      |       |
|-----------------------------------|------|------|-------|
| <i>Goods and Services Sectors</i> | (1)  | (2)  | (3)   |
| African-American                  | 4.30 | 9.0  | 47.8  |
| Hispanic                          | 6.19 | 11.3 | 54.8  |
| Asian                             | 9.61 | 11.7 | 82.1  |
| Native American                   | 6.71 | 9.8  | 68.4  |
| Multiple races reported           | 7.99 | 9.7  | 82.5  |
| Non-minority female               | 7.75 | 7.1  | 109.9 |
| All MWBE                          | 7.16 | 8.0  | 89.9  |

Source: 2000 Five Percent PUMS. See Tables 5.15, Table 5.18.

Notes: Figures in column (1) are average self-employment rates weighted using PUMS population-based person weights. Figures in column (2), top, middle, and bottom panels, are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 5.15, 5.18a, or 5.18b, respectively. Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.22. Disparity Indices from the 2002 Survey of Business Owners: United States, All Industries**

|                               | Number of<br>Firms | Sales and<br>Receipts<br>(\$000s) | Employer<br>Firms | Sales and<br>Receipts<br>(\$000s) | Employees   | Payroll<br>(\$000s) |
|-------------------------------|--------------------|-----------------------------------|-------------------|-----------------------------------|-------------|---------------------|
|                               | (1)                | (2)                               | (3)               | (4)                               | (5)         | (6)                 |
| Panel A. Levels               |                    |                                   |                   |                                   |             |                     |
| United States                 | 22,480,256         | 8,783,541,146                     | 5,172,064         | 8,039,252,709                     | 55,368,216  | 1,626,785,430       |
| Female                        | 6,489,259          | 939,538,208                       | 916,657           | 802,851,495                       | 7,141,369   | 173,528,707         |
| Equally male-/female-owned    | 2,693,360          | 731,678,703                       | 717,961           | 627,202,424                       | 5,664,948   | 129,700,997         |
| African-American              | 1,197,567          | 88,641,608                        | 94,518            | 65,799,425                        | 753,978     | 17,550,064          |
| Hispanic                      | 1,573,464          | 221,927,425                       | 199,542           | 179,507,959                       | 1,536,795   | 36,711,718          |
| Asian                         | 1,103,587          | 326,663,445                       | 319,468           | 291,162,771                       | 2,213,948   | 56,044,960          |
| Native Hawaiian/Pac. Islander | 28,948             | 4,279,591                         | 3,693             | 3,502,157                         | 29,319      | 826,217             |
| Am. Indian & Alaska Native    | 201,387            | 26,872,947                        | 24,498            | 21,986,696                        | 191,270     | 5,135,273           |
| Panel B. Column Percentages   |                    |                                   |                   |                                   |             |                     |
| United States                 | 100.00%            | 100.00%                           | 100.00%           | 100.00%                           | 100.00%     | 100.00%             |
| Female                        | 28.87%             | 10.70%                            | 17.72%            | 9.99%                             | 12.90%      | 10.67%              |
| Equally male-/female-owned    | 11.98%             | 8.33%                             | 13.88%            | 7.80%                             | 10.23%      | 7.97%               |
| African-American              | 5.33%              | 1.01%                             | 1.83%             | 0.82%                             | 1.36%       | 1.08%               |
| Hispanic                      | 7.00%              | 2.53%                             | 3.86%             | 2.23%                             | 2.78%       | 2.26%               |
| Asian                         | 4.91%              | 3.72%                             | 6.18%             | 3.62%                             | 4.00%       | 3.45%               |
| Native Hawaiian/Pac. Islander | 0.13%              | 0.05%                             | 0.07%             | 0.04%                             | 0.05%       | 0.05%               |
| Am. Indian & Alaska Native    | 0.90%              | 0.31%                             | 0.47%             | 0.27%                             | 0.35%       | 0.32%               |
| Panel C. Disparity Indices    |                    |                                   |                   |                                   |             |                     |
|                               | (2) vs. (1)        |                                   | (4) vs. (3)       |                                   | (5) vs. (3) | (6) vs. (3)         |
| Female                        | 37.06%             |                                   | 56.35%            |                                   | 72.77%      | 60.19%              |
| Equally male-/female-owned    | 69.53%             |                                   | 56.20%            |                                   | 73.71%      | 57.43%              |
| African-American              | 18.94%             |                                   | 44.79%            |                                   | 74.52%      | 59.03%              |
| Hispanic                      | 36.10%             |                                   | 57.88%            |                                   | 71.94%      | 58.49%              |
| Asian                         | 75.76%             |                                   | 58.63%            |                                   | 64.74%      | 55.78%              |
| Native Hawaiian/Pac. Islander | 37.84%             |                                   | 61.01%            |                                   | 74.16%      | 71.13%              |
| Am. Indian & Alaska Native    | 34.15%             |                                   | 57.74%            |                                   | 72.93%      | 66.64%              |

Source: NERA calculations using 2002 SBO,. Excludes publicly-owned, foreign-owned, and not-for-profit firms.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.23. Disparity Indices from the 2002 Survey of Business Owners: Georgia and South Carolina, All Industries**

|                               | Number of Firms | Sales and Receipts (\$000s) | Employer Firms | Sales and Receipts (\$000s) | Employees | Payroll (\$000s) |
|-------------------------------|-----------------|-----------------------------|----------------|-----------------------------|-----------|------------------|
|                               | (1)             | (2)                         | (3)            | (4)                         | (5)       | (6)              |
| Panel A. Levels               |                 |                             |                |                             |           |                  |
| Georgia and South Carolina    | 943,023         | 354,627,771                 | 215,690        | 323,135,327                 | 2,282,261 | 62,638,067       |
| Female                        | 273,026         | 40,917,642                  | 38,724         | 35,193,651                  | 289,583   | 6,933,710        |
| Equally male-/female-owned    | 92,899          | 24,316,058                  | 24,575         | 20,559,558                  | 184,508   | 4,044,203        |
| African-American              | 119,074         | 7,261,365                   | 8,644          | 4,935,616                   | 55,264    | 1,175,411        |
| Hispanic                      | 21,325          | 4,891,478                   | 3,315          | 4,080,718                   | 25,996    | 640,432          |
| Asian                         | 31,339          | 10,044,531                  | 11,335         | 9,082,860                   | 69,567    | 1,483,857        |
| Native Hawaiian/Pac. Islander | 217             | 34,854                      | 49             | 18,775                      | 159       | 4,029            |
| Am. Indian & Alaska Native    | 5,894           | 736,808                     | 902            | 564,784                     | 7,270     | 131,029          |
| Panel B. Column Percentages   |                 |                             |                |                             |           |                  |
| Georgia and South Carolina    | 100.00%         | 100.00%                     | 100.00%        | 100.00%                     | 100.00%   | 100.00%          |
| Female                        | 28.95%          | 11.54%                      | 17.95%         | 10.89%                      | 12.69%    | 11.07%           |
| Equally male-/female-owned    | 9.85%           | 6.86%                       | 11.39%         | 6.36%                       | 8.08%     | 6.46%            |
| African-American              | 12.63%          | 2.05%                       | 4.01%          | 1.53%                       | 2.42%     | 1.88%            |
| Hispanic                      | 2.26%           | 1.38%                       | 1.54%          | 1.26%                       | 1.14%     | 1.02%            |
| Asian                         | 3.32%           | 2.83%                       | 5.26%          | 2.81%                       | 3.05%     | 2.37%            |
| Native Hawaiian/Pac. Islander | 0.02%           | 0.01%                       | 0.02%          | 0.01%                       | 0.01%     | 0.01%            |
| Am. Indian & Alaska Native    | 0.63%           | 0.21%                       | 0.42%          | 0.17%                       | 0.32%     | 0.21%            |
| Panel C. Disparity Indices    |                 |                             |                |                             |           |                  |
| Female                        |                 | 39.85%                      |                | 60.66%                      | 70.67%    | 61.66%           |
| Equally male-/female-owned    |                 | 69.60%                      |                | 55.84%                      | 70.96%    | 56.67%           |
| African-American              |                 | 16.22%                      |                | 38.11%                      | 60.42%    | 46.82%           |
| Hispanic                      |                 | 61.00%                      |                | 82.17%                      | 74.11%    | 66.52%           |
| Asian                         |                 | 85.23%                      |                | 53.49%                      | 58.00%    | 45.08%           |
| Native Hawaiian/Pac. Islander |                 | 42.71%                      |                | 25.58%                      | 30.67%    | 28.31%           |
| Am. Indian & Alaska Native    |                 | 33.24%                      |                | 41.79%                      | 76.17%    | 50.02%           |

Source: See Table 5.22.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.24. Disparity Indices from the 2002 Survey of Business Owners: United States, Construction and CRS Industries**

|                               | Number of Firms | Sales and Receipts (\$000s) | Employer Firms | Sales and Receipts (\$000s) | Employees  | Payroll (\$000s) |
|-------------------------------|-----------------|-----------------------------|----------------|-----------------------------|------------|------------------|
|                               | (1)             | (2)                         | (3)            | (4)                         | (5)        | (6)              |
| Panel A. Levels               |                 |                             |                |                             |            |                  |
| United States                 | 5,996,428       | 1,685,502,784               | 1,406,037      | 1,476,285,725               | 10,446,834 | 410,330,833      |
| Female                        | 1,136,584       | 147,556,354                 | 185,072        | 119,542,082                 | 1,028,439  | 37,265,214       |
| Equally male-/female-owned    | 566,062         | 132,088,134                 | 154,135        | 108,702,609                 | 871,950    | 28,975,443       |
| African-American              | 190,840         | 19,026,591                  | 19,743         | 14,600,451                  | 125,988    | 4,596,509        |
| Hispanic                      | 350,845         | 46,462,089                  | 44,506         | 34,190,411                  | 288,520    | 9,446,399        |
| Asian                         | 193,007         | 36,948,648                  | 37,390         | 31,489,180                  | 242,907    | 11,627,079       |
| Native Hawaiian/Pac. Islander | 6,092           | 1,173,615                   | 321            | 172,732                     | 1,351      | 53,364           |
| Am. Indian & Alaska Native    | 54758           | 8145166                     | 8103           | 6435409                     | 46650      | 1712542          |
| Panel B. Column Percentages   |                 |                             |                |                             |            |                  |
| United States                 | 100.00%         | 100.00%                     | 100.00%        | 100.00%                     | 100.00%    | 100.00%          |
| Female                        | 18.95%          | 8.75%                       | 13.16%         | 8.10%                       | 9.84%      | 9.08%            |
| Equally male-/female-owned    | 9.44%           | 7.84%                       | 10.96%         | 7.36%                       | 8.35%      | 7.06%            |
| African-American              | 3.18%           | 1.13%                       | 1.40%          | 0.99%                       | 1.21%      | 1.12%            |
| Hispanic                      | 5.85%           | 2.76%                       | 3.17%          | 2.32%                       | 2.76%      | 2.30%            |
| Asian                         | 3.22%           | 2.19%                       | 2.66%          | 2.13%                       | 2.33%      | 2.83%            |
| Native Hawaiian/Pac. Islander | 0.10%           | 0.07%                       | 0.02%          | 0.01%                       | 0.01%      | 0.01%            |
| Am. Indian & Alaska Native    | 0.91%           | 0.48%                       | 0.58%          | 0.44%                       | 0.45%      | 0.42%            |
| Panel C. Disparity Indices    |                 |                             |                |                             |            |                  |
| Female                        |                 | 46.19%                      |                | 61.52%                      | 74.79%     | 69.00%           |
| Equally male-/female-owned    |                 | 83.02%                      |                | 67.17%                      | 76.14%     | 64.42%           |
| African-American              |                 | 35.47%                      |                | 70.43%                      | 85.89%     | 79.78%           |
| Hispanic                      |                 | 47.11%                      |                | 73.17%                      | 87.25%     | 72.73%           |
| Asian                         |                 | 68.11%                      |                | 80.21%                      | 87.44%     | 106.56%          |
| Native Hawaiian/Pac. Islander |                 | 68.54%                      |                | 51.25%                      | 56.65%     | 56.96%           |
| Am. Indian & Alaska Native    |                 | 52.92%                      |                | 75.64%                      | 77.49%     | 72.42%           |

Source: See Table 5.22.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.25. Disparity Indices from the 2002 Survey of Business Owners: Georgia and South Carolina, Construction and CRS Industries**

|                               | Number of<br>Firms | Sales and<br>Receipts<br>(\$000s) | Employer<br>Firms | Sales and<br>Receipts<br>(\$000s) | Employees | Payroll<br>(\$000s) |
|-------------------------------|--------------------|-----------------------------------|-------------------|-----------------------------------|-----------|---------------------|
|                               | (1)                | (2)                               | (3)               | (4)                               | (5)       | (6)                 |
| Panel A. Levels               |                    |                                   |                   |                                   |           |                     |
| United States                 | 266,189            | 71,210,126                        | 61,899            | 73,202,228                        | 488,263   | 17,100,853          |
| Female                        | 45,841             | 5,719,694                         | 7,660             | 4,519,314                         | 37,235    | 1,246,521           |
| Equally male-/female-owned    | 21,012             | 4,786,655                         | 5,668             | 1,774,349                         | 17,768    | 520,533             |
| African-American              | 20,036             | 1,663,807                         | 2,069             | 1,175,171                         | 9,539     | 295,348             |
| Hispanic                      | 8,625              | 1,004,892                         | 795               | 549,887                           | 4,844     | 152,567             |
| Asian                         | 3,734              | 845,084                           | 731               | 587,472                           | 4,101     | 240,972             |
| Native Hawaiian/Pac. Islander | 34                 | 13,177                            | 15                | 12,670                            | 77        | 2,886               |
| Am. Indian & Alaska Native    | 2086               | 159616                            | 139               | 41161                             | 401       | 11049               |
| Panel B. Column Percentages   |                    |                                   |                   |                                   |           |                     |
| United States                 | 100.00%            | 100.00%                           | 100.00%           | 100.00%                           | 100.00%   | 100.00%             |
| Female                        | 17.22%             | 8.03%                             | 12.37%            | 6.17%                             | 7.63%     | 7.29%               |
| Equally male-/female-owned    | 7.89%              | 6.72%                             | 9.16%             | 2.42%                             | 3.64%     | 3.04%               |
| African-American              | 7.53%              | 2.34%                             | 3.34%             | 1.61%                             | 1.95%     | 1.73%               |
| Hispanic                      | 3.24%              | 1.41%                             | 1.28%             | 0.75%                             | 0.99%     | 0.89%               |
| Asian                         | 1.40%              | 1.19%                             | 1.18%             | 0.80%                             | 0.84%     | 1.41%               |
| Native Hawaiian/Pac. Islander | 0.01%              | 0.02%                             | 0.02%             | 0.02%                             | 0.02%     | 0.02%               |
| Am. Indian & Alaska Native    | 0.78%              | 0.22%                             | 0.22%             | 0.06%                             | 0.08%     | 0.06%               |
| Panel C. Disparity Indices    |                    |                                   |                   |                                   |           |                     |
| Female                        |                    | 46.64%                            |                   | 49.89%                            | 61.62%    | 58.90%              |
| Equally male-/female-owned    |                    | 85.16%                            |                   | 26.47%                            | 39.74%    | 33.24%              |
| African-American              |                    | 31.04%                            |                   | 48.03%                            | 58.45%    | 51.67%              |
| Hispanic                      |                    | 43.55%                            |                   | 58.49%                            | 77.24%    | 69.46%              |
| Asian                         |                    | 84.60%                            |                   | 67.96%                            | 71.12%    | 119.32%             |
| Native Hawaiian/Pac. Islander |                    | 144.87%                           |                   | 71.42%                            | 65.08%    | 69.64%              |
| Am. Indian & Alaska Native    |                    | 28.60%                            |                   | 25.04%                            | 36.57%    | 28.77%              |

Source: See Table 5.22.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.26. Disparity Indices from the 2002 Survey of Business Owners: United States, Goods and Services Industries**

|                               | Number of Firms | Sales and Receipts (\$000s) | Employer Firms | Sales and Receipts (\$000s) | Employees  | Payroll (\$000s) |
|-------------------------------|-----------------|-----------------------------|----------------|-----------------------------|------------|------------------|
|                               | (1)             | (2)                         | (3)            | (4)                         | (5)        | (6)              |
| Panel A. Levels               |                 |                             |                |                             |            |                  |
| United States                 | 16,483,828      | 7,098,038,362               | 3,766,027      | 6,562,966,984               | 44,921,382 | 1,216,454,597    |
| Female                        | 5,352,675       | 791,981,854                 | 731,585        | 683,309,413                 | 6,112,930  | 136,263,493      |
| Equally male-/female-owned    | 2,127,298       | 599,590,569                 | 563,826        | 518,499,815                 | 4,792,998  | 100,725,554      |
| African-American              | 1,006,727       | 69,615,017                  | 74,775         | 51,198,974                  | 627,990    | 12,953,555       |
| Hispanic                      | 1,222,619       | 175,465,336                 | 155,036        | 145,317,548                 | 1,248,275  | 27,265,319       |
| Asian                         | 910,580         | 289,714,797                 | 282,078        | 259,673,591                 | 1,971,041  | 44,417,881       |
| Native Hawaiian/Pac. Islander | 22,856          | 3,105,976                   | 3,372          | 3,329,425                   | 27,968     | 772,853          |
| Am. Indian & Alaska Native    | 146629          | 18727781                    | 16395          | 15551287                    | 144620     | 3422731          |
| Panel B. Column Percentages   |                 |                             |                |                             |            |                  |
| United States                 | 100.00%         | 100.00%                     | 100.00%        | 100.00%                     | 100.00%    | 100.00%          |
| Female                        | 32.47%          | 11.16%                      | 19.43%         | 10.41%                      | 13.61%     | 11.20%           |
| Equally male-/female-owned    | 12.91%          | 8.45%                       | 14.97%         | 7.90%                       | 10.67%     | 8.28%            |
| African-American              | 6.11%           | 0.98%                       | 1.99%          | 0.78%                       | 1.40%      | 1.06%            |
| Hispanic                      | 7.42%           | 2.47%                       | 4.12%          | 2.21%                       | 2.78%      | 2.24%            |
| Asian                         | 5.52%           | 4.08%                       | 7.49%          | 3.96%                       | 4.39%      | 3.65%            |
| Native Hawaiian/Pac. Islander | 0.14%           | 0.04%                       | 0.09%          | 0.05%                       | 0.06%      | 0.06%            |
| Am. Indian & Alaska Native    | 0.89%           | 0.26%                       | 0.44%          | 0.24%                       | 0.32%      | 0.28%            |
| Panel C. Disparity Indices    |                 |                             |                |                             |            |                  |
| Female                        |                 | 34.36%                      |                | 53.60%                      | 70.05%     | 57.66%           |
| Equally male-/female-owned    |                 | 65.46%                      |                | 52.77%                      | 71.27%     | 55.31%           |
| African-American              |                 | 16.06%                      |                | 39.29%                      | 70.41%     | 53.63%           |
| Hispanic                      |                 | 33.33%                      |                | 53.79%                      | 67.50%     | 54.45%           |
| Asian                         |                 | 73.89%                      |                | 52.83%                      | 58.58%     | 48.75%           |
| Native Hawaiian/Pac. Islander |                 | 31.56%                      |                | 56.66%                      | 69.54%     | 70.96%           |
| Am. Indian & Alaska Native    |                 | 29.66%                      |                | 54.43%                      | 73.95%     | 64.63%           |

Source: See Table 5.22.

# Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

**Table 5.27. Disparity Indices from the 2002 Survey of Business Owners: Georgia and South Carolina, Goods and Services Industries**

|                               | Number of Firms | Sales and Receipts (\$000s) | Employer Firms | Sales and Receipts (\$000s) | Employees | Payroll (\$000s) |
|-------------------------------|-----------------|-----------------------------|----------------|-----------------------------|-----------|------------------|
|                               | (1)             | (2)                         | (3)            | (4)                         | (5)       | (6)              |
| Panel A. Levels               |                 |                             |                |                             |           |                  |
| United States                 | 676,834         | 283,417,645                 | 153,791        | 249,933,099                 | 1,793,998 | 45,537,214       |
| Female                        | 227,185         | 35,197,948                  | 31,064         | 30,674,337                  | 252,348   | 5,687,189        |
| Equally male-/female-owned    | 71,887          | 19,529,403                  | 18,907         | 18,785,209                  | 166,740   | 3,523,670        |
| African-American              | 99,038          | 5,597,558                   | 6,575          | 3,760,445                   | 45,725    | 880,063          |
| Hispanic                      | 12,700          | 3,886,586                   | 2,520          | 3,530,831                   | 21,152    | 487,865          |
| Asian                         | 27,605          | 9,199,447                   | 10,604         | 8,495,388                   | 65,466    | 1,242,885        |
| Native Hawaiian/Pac. Islander | 183             | 21,677                      | 34             | 6,105                       | 82        | 1,143            |
| Am. Indian & Alaska Native    | 3808            | 577192                      | 763            | 523623                      | 6869      | 119980           |
| Panel B. Column Percentages   |                 |                             |                |                             |           |                  |
| United States                 | 100.00%         | 100.00%                     | 100.00%        | 100.00%                     | 100.00%   | 100.00%          |
| Female                        | 33.57%          | 12.42%                      | 20.20%         | 12.27%                      | 14.07%    | 12.49%           |
| Equally male-/female-owned    | 10.62%          | 6.89%                       | 12.29%         | 7.52%                       | 9.29%     | 7.74%            |
| African-American              | 14.63%          | 1.98%                       | 4.28%          | 1.50%                       | 2.55%     | 1.93%            |
| Hispanic                      | 1.88%           | 1.37%                       | 1.64%          | 1.41%                       | 1.18%     | 1.07%            |
| Asian                         | 4.08%           | 3.25%                       | 6.90%          | 3.40%                       | 3.65%     | 2.73%            |
| Native Hawaiian/Pac. Islander | 0.03%           | 0.01%                       | 0.02%          | 0.00%                       | 0.00%     | 0.00%            |
| Am. Indian & Alaska Native    | 0.56%           | 0.20%                       | 0.50%          | 0.21%                       | 0.38%     | 0.26%            |
| Panel C. Disparity Indices    |                 |                             |                |                             |           |                  |
| Female                        |                 | 37.00%                      |                | 60.76%                      | 69.64%    | 61.83%           |
| Equally male-/female-owned    |                 | 64.88%                      |                | 61.14%                      | 75.60%    | 62.94%           |
| African-American              |                 | 13.50%                      |                | 35.19%                      | 59.62%    | 45.20%           |
| Hispanic                      |                 | 73.08%                      |                | 86.22%                      | 71.95%    | 65.38%           |
| Asian                         |                 | 79.58%                      |                | 49.30%                      | 52.92%    | 39.58%           |
| Native Hawaiian/Pac. Islander |                 | 28.29%                      |                | 11.05%                      | 20.67%    | 11.35%           |
| Am. Indian & Alaska Native    |                 | 36.20%                      |                | 42.23%                      | 77.18%    | 53.11%           |

Source: See Table 5.22.

## **Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings**



## VI. Statistical Disparities in Capital Markets

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. Among such characteristics, the most commonly considered are race, ethnicity and gender. In labor markets, this might translate into equally productive workers in similar jobs being paid different salaries because of their race, ethnicity or gender. In credit markets, it might translate into loan approvals differing across racial or gender groups with otherwise similar financial backgrounds.

In this Chapter, we examine whether there is evidence consistent with the presence of discrimination in the small business credit market against minority-owned or women-owned small businesses. Discrimination in the credit market against such businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place.

In our analysis, we use data from the Federal Reserve Board to examine the existence or otherwise of discrimination in the small business credit market for 1993, 1998 and 2003. These surveys are based on a large representative sample of firms with fewer than 500 employees and are administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms but the 2003 survey did not.<sup>153</sup>

These data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African-American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African-American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms are substantially and statistically significantly more likely to be denied credit than are non-minority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms applied for a loan their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history.
- When minority-owned firms *did* receive a loan they were obligated to pay higher interest rates on the loans than comparable non-minority-owned firms.

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<sup>153</sup> The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, see NORC (2005), p. 11.

## Statistical Disparities in Capital Markets

- A larger proportion of minority-owned firms than non-minority-owned firms report that credit market conditions are a serious concern.
- A larger share of minority-owned firms than non-minority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year.
- There is no evidence that discrimination in the market for credit is significantly different in the South Atlantic census region or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole.
- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003.

The structure of this Chapter is as follows. First, we outline the main theories of discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the data files used in the remainder of the Chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we provide a series of answers to criticisms. Finally, we present our conclusions.

### A. Theoretical Framework and Review of the Literature

Most recent economic studies of discrimination draw on the analyses contained in Gary Becker's (1957) *The Economics of Discrimination*. Becker's main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group or (b) requiring better characteristics (*i.e.* a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or be given less favorable terms on the loan.

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ statistical discrimination—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would rather reflect an attempt to minimize costs. Empirically, the

racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

There has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of “redlining”—that is, not granting loans for properties located in certain areas. To analyze that issue, the Home Mortgage Disclosure Act was passed to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell et al., 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, non-minorities had 10 percent of their loans rejected whereas rejection rates were 28 percent for both African-Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, etc.) were controlled for, African-Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell et al. (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution’s files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired “identical” applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (*cf.* Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows non-minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and Simon, 1997).

We now turn to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.<sup>154</sup>

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<sup>154</sup> Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the

Liquidity constraints can be a problem in starting a business as well as in running it. Discrimination in the credit market against minority-owned small businesses can have a devastating effect on the success of such businesses, and even prevent them from opening in the first place. Evidence of the latter effect is provided in the economics literature on self-employment.<sup>155</sup>

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,<sup>156</sup> Bates argued that “from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and non-minority stereotypes about suitable roles for minorities in society” (Bates, 1989; Bates, 1993; Bates, 1973). Indeed, as Bates points out, Gunnar Myrdal observed,

“The Negro businessman ... encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down” (Myrdal, 1944, 308).

Bates goes on to argue that commercial banks lend most easily to non-minority males who possess significant amounts of equity capital to invest in their businesses (Bates, 1991a). Apart from banks, an important source of debt capital for small business is likely to be family and friends, but the low wealth of African-American households reduces the availability of debt capital that family and friends could invest in small business operations (Bates, 1993; Bates, 1991b).

Additional evidence indicates that capital constraints for African-American-owned businesses are particularly large. For instance, Bates (1989) finds that racial differences in levels of financial capital do have a significant effect upon racial patterns in business failure rates. Fairlie and Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper Fairlie (1998) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why African-American men are one-third as likely to be self-employed as non-minority men. The author finds that the large discrepancy is due to a African-American transition rate into self-employment that is approximately one half the non-minority rate and a African-American transition rate out of self-employment that is twice the non-minority rate. He finds that capital constraints—measured by interest income and lump-sum cash

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probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Holtz-Eakin et al. (1994a, 1994b) examine flows in and out of self-employment and find that inheritances both raise entry and slow exit. Black, de Meza and Jeffreys (1996) find that housing equity plays an important role in shaping the supply of entrepreneurs. Lindh and Ohlsson (1996) suggest that the probability of being self-employed increases when people receive windfall gains in the form of lottery winnings and inheritances.

<sup>155</sup> See Chapter V, above.

<sup>156</sup> 298 F.Supp.2d 725 (N.D. Ill. 2003).

payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for African-American self-employed than for non-minority self-employed persons. Fairlie then attempts to decompose the racial gap in the transition rate into self-employment into a part due to differences in the distributions of individual characteristics and a part due to differences in the processes generating the transitions. He finds that differences in the distributions of characteristics between African-Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, that “the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks” (1998, p.14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported in this study. This paper documents that a large discrepancy exists in credit access between non-minorities and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm’s credit history and that of its owner, reducing the ability to provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions. In an unpublished paper, Cole (1998) uses the 1993 NSSBF and estimates models of loan denials similar in nature to those discussed in this Study.

The present analysis takes advantage of the 1993 NSSBF data, the 1998 Survey of Small Business Finances (SSBF) data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier NSSBF data, and the 1993 and 1998 surveys have larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

## **B. Empirical Framework and Description of the Data**

### **1. Introduction**

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African-American-owned firms compared to non-minority-owned firms is consistent with discrimination, it is necessary to compare African-American- and non-minority-owned firms that have similar risks of default, that is, the fraction of the African-American firms’ loans that would be approved if they had the same creditworthiness as the non-minority-owned firms. A standard approach to this problem is to statistically control for firms’ characteristics relevant to the loan decision. If African-American-owned firms with the same likelihood of default as non-minority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell et al. (1996) we estimated the following loan denial equation:

$$(1) \quad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

where  $D_i$  represents an indicator variable for loan denial for firm  $i$  (that is, 1 if the loan is denied and 0 if accepted),  $CW$  represents measures of creditworthiness,  $X$  represents other firm characteristics,  $R$  represents the race, ethnicity or gender of the firm's ownership, and  $\Phi$  is the cumulative normal probability distribution.<sup>157</sup> This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors.<sup>158</sup> Within the framework of this model, a positive estimate of  $\beta_3$  is consistent with the presence of discrimination.<sup>159</sup>

## 2. 1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.<sup>160</sup> In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African-Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (*i.e.* Asians, Pacific Islanders, American Indians, and Alaska Natives).<sup>161</sup>

Table 6.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African-American-owned firms are almost 2.5

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<sup>157</sup> Additional discussion of Probit regression appears in Chapter V, Section C.1.

<sup>158</sup> Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of African-American-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for non-minority and African-American-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

<sup>159</sup> The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

<sup>160</sup> The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

<sup>161</sup> There were also two firms in the "Other race" category in 1993 that reported multiple or mixed race.

times more likely to have a loan application rejected as are non-Hispanic White-owned firms (hereafter “non-minority”) (65.9 percent versus 26.9 percent).<sup>162</sup> Other minority groups are denied at rates higher than non-minorities as well, but the magnitude of the African-American-non-minority differential is especially striking.

Minority-owned firms, however, do have characteristics that are different from those of non-minority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their non-minority counterparts. Minority firms were also less creditworthy, on average, than their non-minority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to non-minority-owned firms, African-American-owned firms were also more likely, on average to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than non-minority-owned firms. This was particularly true for African-American-owned firms, who requested loans that were, on average, about 60 percent smaller than those requested by non-minority-owned firms; and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by non-minority-owned firms.

The NSSBF database does not identify the specific city or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 6.2 presents evidence for the South Atlantic Census division (hereafter SATL), which includes the Augusta-Richmond County, GA-SC metropolitan statistical area.<sup>163</sup> The 1993 SATL sample includes the owners of 773 firms, of which 342 firms said that they had applied for a loan over the preceding three-year period.

The overall denial rate in the SATL is slightly lower than the national rate reported in Table 6.1, but this difference is not statistically significant. The difference in the denial rates between African-American-owned and non-minority-owned firms is also slightly larger in the SATL (39.0 percentage points nationally and 43.5 percentage points in the SATL), but again this difference is not statistically significant. Indeed, in the large majority of cases (over 80 percent),

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<sup>162</sup> Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. non-minority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African-Americans, 36 percent for Hispanics, and 24 percent for other races, which are broadly similar to the differences reported here. These estimates for minority groups are estimated with less precision, however, because of the smaller number of minority-owned firms in the 1987 sample.

<sup>163</sup> The Augusta-Richmond County metropolitan area includes portions of Georgia and South Carolina in the South Atlantic division. The other states in the South Atlantic division include Delaware, the District of Columbia, Florida, Maryland, North Carolina, Virginia, and West Virginia.

the weighted sample means are not statistically significantly different in the SATL than in the nation as a whole—either overall or by race, ethnicity or gender.

### C. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves say are their main problems. While this evidence is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding discrimination in obtaining credit. That African-American-owned firms and other minorities report greater difficulty in obtaining credit than do non-minority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 6.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African-Americans and Hispanics were much more likely to say that it had been a “serious” problem (31.3 percent and 22.9 percent, respectively) than non-minorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas—(1) training costs; (2) worker's compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) the Americans with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) the Family and Medical Leave Act. Differences by race, ethnicity or gender are much less pronounced in these eight areas than they are in relation to credit market conditions.<sup>164</sup> The finding that African-American-owned and Hispanic-owned firms are largely indistinguishable from non-minority-owned firms in reporting a variety of problems, except for the case of credit, indicates that minority-owned firms perceive credit availability to be a particular problem for them.

Results are broadly similar in Table 6.4 for the SATL region—with African-American, Hispanic, and other minority-owned firms being more likely than non-minority-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

Table 6.5 reports the views of NSSBF respondents for the U.S. as a whole and Table 6.6 reports views for the SATL on the most important issue businesses expected to face over the next 12 months. Nationally, credit availability and cash flow again appear to be more important issues for African-American-owned firms than for non-minority-owned firms. non-minority-owned firms were especially worried about health care costs. Hispanic and Other minority-owned firms were especially worried about general business conditions.

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<sup>164</sup> We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African-American-owned firms were more likely to report that credit market conditions were especially serious.



In the SATL, credit availability and cash flow are far more important issues for African-American-owned firms than for non-minority-owned firms. Almost four times as many African-American-owned firms reported credit availability as the most important issue than non-minority-owned firms. In contrast, in the SATL health care costs were a large concern for all types of firms.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey, conducted by the Census Bureau, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African-American-owned firms reporting an answer indicated that lack of financial capital had a strong adverse impact—compared to only 17.3 percent among non-minority male-owned firms. Hispanic-owned firms and other minority-owned firms also reported higher percentages than non-minority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African-American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than non-minority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by non-minority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African-Americans, 8.8 percent for Hispanics, 6.1 percent for other minorities, and 9.3 percent for women. Another 2.7 percent of non-minority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African-Americans, 5.8 percent for Hispanics, 6.4 percent of Other minorities, and 3.3 percent for women.<sup>165</sup>

A recent study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.<sup>166</sup> The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. As detailed in Table 6.7, minority-owned businesses report that availability of credit is their top problem. The biggest difference in responses between minorities and non-minority men and women was availability of credit: 19 percent of non-minority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and non-minority women. In no other category is there more than a 10 percentage point difference for men or women.

In summary, African-American-owned and Hispanic-owned firms in particular and to a lesser extent other minority-owned firms and women-owned firms report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the

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<sup>165</sup> Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

<sup>166</sup> Unfortunately, although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). Unfortunately, questions relating to the importance of access to financial loans and credit to business success were not included in the 2002 survey.

future. Whether or not these perceptions reflect actual discrimination can be distinguished in the econometric analyses to follow.

### D. Differences in Loan Denial Rates by Race, Ethnicity or Gender

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this question we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 6.8 and Table 6.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the SATL region.<sup>167</sup> As indicated earlier, the 1993-2003 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race, ethnicity and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.<sup>168</sup> In Column (1) of Table 6.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African-American indicator can be interpreted as indicating that the denial rate for African-American-owned businesses is 44.3 percentage points higher than that for non-minority male-owned firms.<sup>169</sup>

The remainder of Table 6.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.<sup>170</sup> In Column (2) a

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<sup>167</sup> Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are non-minority firms owned 50-50 by women and men.

<sup>168</sup> For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 6.8, the estimated coefficient of -0.003 on owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

<sup>169</sup> This estimate largely replicates the raw difference in denial rates between African-American- and non-minority-owned businesses reported in Table 6.1. The raw differential observed there ( $0.659 - 0.269 = 0.39$ ) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a non-minority female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 6.8 and subsequent tables we report only unweighted estimates.

<sup>170</sup> In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between non-minorities and African-Americans. The F-Test conducted to determine whether parameter estimates were the same for African-Americans and non-minorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be

number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability. **Even after controlling for these differences in creditworthiness, however, African-American-owned firms remain 29 percentage points more likely than non-minority-owned firms to have their loan request denied.**

The models reported in Columns (3) through (5) of Table 6.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry group. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which the firm applied.<sup>171</sup> In total these three columns add 176 variables to the more parsimonious specification reported in Column (2).<sup>172</sup> Nevertheless, the estimated disadvantage experienced by African-American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African-American-owned firms are 24 percentage points more likely than non-minority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than non-minority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly different from the denial rates of firms owned by non-minorities; or that denial rates for firms owned by non-minority women were significantly different from those for firms owned by non-minority men.

In Table 6.9, we see results for the SATL region similar to those reported in Table 6.8 for the nation as a whole. The table shows that the results of our loan denial model in the SATL, which includes the Augusta metropolitan area, are not substantially different from the nationwide

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the same between African-Americans and non-minorities and using the coefficient on the African-American indicator variable to measure the gap between groups. In this Chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

<sup>171</sup> Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall seventeen different types of financial institution were tabulated, although only the following accounted for more than 1% of the (weighted) total— Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

<sup>172</sup> One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 6.8 (see Tables 6.27 and 6.28).

results reported in Table 6.8. The indicator variable for the SATL region is insignificantly different from zero; as are the interaction terms between race/ethnicity/gender and the SATL region.<sup>173</sup>

Although the results provided so far strongly indicate that financial institutions treat African-American-owned and non-minority male-owned small businesses differently in lending, other considerations may limit our ability to interpret this finding as discrimination. Of perhaps greatest concern is the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African-American-owned firms are less creditworthy and we have failed to sufficiently capture those differences then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, however, if financial institutions discriminate against African-American-owned firms, then the greater likelihood of denial for African-Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.<sup>174</sup>

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match reasonably closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The main shortcoming that we have identified in these data is that less detail is available on the finances of the owner of the

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<sup>173</sup> The number of Native Americans in the SATL sample was too small to yield statistical results.

<sup>174</sup> An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

firm.<sup>175</sup> Although the creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income. These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition may introduce a bias into our analysis if African-American business owners have fewer resources than non-minority business owners.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African-American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.<sup>176</sup> Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for any of these other purposes are at least partially collateralized because the financial institution could sell them, albeit at a potentially somewhat reduced rate, should the small business default.<sup>177</sup>

In order to determine whether the findings for the SATL region were different from those for the nation, in the second column of Table 6.10 we also report the coefficient and t-statistics on an interaction term between the SATL region and African-American ownership. In only one case was the estimated coefficient on this interaction significant, implying that the national results also apply in general to the SATL.

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<sup>175</sup> This deficiency is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

<sup>176</sup> As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. 14 percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the SATL, the figures are 6.0, 34.3, 12 percent, and 26 percent, respectively.

<sup>177</sup> As indicated earlier, greater personal wealth may improve a small business's chances of obtaining credit because it provides collateral should the loan go bad and because wealthy owners can use their own resources to weather bad times, improving the likelihood of repayment. Our separate analysis of corporations and proprietorships and of large and small firms does not account for this second reason because corporations and large businesses may still need to draw on the owner's personal wealth to help it survive short-term shocks. Businesses that have been in existence for several years, however, are less likely to experience these shocks, making them less likely to require infusions from the owner's personal wealth. A loan used to purchase equipment that can be sold if the firm defaults similarly insulates the bank from the need to seek repayment directly from the owner.

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 6.8 or 6.9. Estimates presented in row numbers 1 through 9 of Table 6.10 indicate that African-American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African-American-owned firms are 18, 25, and 16 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributed to differences in the geographic location of African-American- and non-minority-owned firms. If, for example, African-American-owned firms are more likely to be located in the central city, and a central city location is inversely correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in rejecting the loan applications of African-American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled "statistical discrimination." In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.<sup>178</sup>

To identify whether lenders' behavior is consistent with this hypothesis we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan denial rates should be greater in the firms that sell in the local marketplace. The results of this test, reported in row numbers 9 and 10 of Table 6.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates for the nation as a whole indicate that African-American-owned firms that sell to the local market are 11 percentage points more likely to have their loan applications denied compared to a 20 percent excess denial rate for firms selling primarily to regional, national, or international markets. In the SATL, however, the figures are reversed, indicating that statistical discrimination may in fact be occurring in this region.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 6.1 and 6.2, African-American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 6.8 and 6.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 6.10, we separated

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<sup>178</sup> A strong test to distinguish between statistical discrimination and "Becker-Type" discrimination would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this Chapter applies a definition that incorporates both.

firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African-American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African-American- and non-minority-owned firms is statistically indistinguishable within in each of these groups. Asian-owned firms and non-minority female-owned firms with clean credit histories, as well, are also at a significant disadvantage relative to non-minority-male owned firms.

Finally, we considered whether African-American-owned firms are treated differently from non-minority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is less likely that the race of the applicant is known to the financial institution, at least in the case of African-American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about minority status. On the other hand, for Asian and Hispanic applicants, it is possible that surname does provide such a signal, although an imperfect one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African-American- and non-minority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African-Americans in providing small business loans, we may even expect to see African-Americans use credit cards more often than non-minorities since they have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.<sup>179</sup>

In Tables 6.11 and 6.12, we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other differences across firms.<sup>180</sup> There is no evidence, either for the U.S. as a whole or for the SATL, that African-American-owned firms are less likely to access either business or personal credit cards for business expenses. On the other hand, there is evidence in the SATL and in the nation as a whole that Asian-owned firms are less likely to access business credit cards. Credit card use for financing business expenses may be an area where further research is warranted. Unfortunately, available data on this subject is quite limited.

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<sup>179</sup> It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzzo, Cavalluzzo, and Wolken (1999) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

<sup>180</sup> On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the SATL the figures are 29 percent and 36 percent, respectively.

### E. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and non-minority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and non-minority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

$$(2) \quad I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i,$$

where  $I$  represents the interest rate charged on the loan,  $LC$  represents characteristics of the loan (see the notes to Table 6.8 for a full list of the variables included in this set),  $\varepsilon_i$  is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African-American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since African-American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in interest rate to be even greater if those firms were included in the sample. We overlook this implication in the results reported below, but its impact should be kept in mind.

The results obtained from estimating equation (2) are reported in Row 1 of Table 6.13, which includes the complete set of control variables comparable to those in Column (5) of Table 6.8. Estimates indicated that African-American-owned firms pay rates of interest that are roughly 1 full percentage point higher than similarly situated non-minority-owned firms. Row 2 shows that



even African-American-owned firms with good credit histories are charged higher interest rates relative to non-minority-owned firms.<sup>181</sup>

The remainder of the table presents similar specification checks to those reported in Table 6.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African-American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African-Americans, and to a lesser extent Hispanics and Asians, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

Table 6.14 shows results for the SATL. Findings are comparable to those for the nation as a whole.

### **F. Loan Approval Rates and Access to Credit**

The results presented so far may be biased toward finding too small a disparity between non-minority- and African-American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by non-minorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African-American- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 6.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other characteristics of firms, and the results indicate that African-American- and Hispanic-owned firms are 40 and 23 percentage points more likely than non-minority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 6.15 reports comparable models that control for

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<sup>181</sup> Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among African-American- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26 and 16 percentage points still exists for African-American- and Hispanic-owned firms relative to non-minority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, minority-owned firms were far more likely to report prejudice as the reason (19 percent for African-American-owned firms, 8 percent for Hispanic-owned firms, and 3 percent for non-minority-owned firms).<sup>182</sup> Results obtained in section (b) of Table 6.15 for the SATL region are very similar to those found for the nation as a whole. Further, as section (c) of Table 6.15 shows, African-American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.<sup>183</sup>

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 6.8 and 6.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

More formally, suppose that loan denial rates for equally creditworthy non-minority- and minority-owned firms that applied for credit are  $\theta^W$  and  $\theta^M$ , respectively; the measure of discrimination employed in the previous analysis is  $\theta^M - \theta^W$ . Now suppose that firms that are equally creditworthy, but chose not to apply for a loan because they feared rejection, would have been denied at the rates  $\theta^W$  and  $\psi^M$  for non-minority- and minority-owned firms, respectively. Among the non-minority-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the correct representation of the disadvantage faced by minority-owned firms is  $[\eta\theta^M + (1-\eta)\psi^M] - \theta^W$ , where  $\eta$  represents the share of minority-owned firms desiring credit that submitted an application. Our earlier findings are biased if  $\theta^M$  is not equal to  $\psi^M$ .

One approach that is frequently employed to address such a problem is to estimate a “Heckman-correction” that would formally model the application process in conjunction with the loan outcome for those who applied. The difficulty with this methodology in the present context is that it is only correctly implemented when some variable is present that is correlated with a firm’s decision to apply for a loan, but is independent of the financial institution’s decision to

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<sup>182</sup> Other reasons given, including “too little collateral,” “poor credit history,” and “poor balance sheet,” are comparable across groups. Firms could report more than one reason.

<sup>183</sup> It was not possible to report separate construction results in earlier tables because of small sample sizes.

approve or deny the request. Unfortunately, the NSSBF data do not appear to contain any variables that would satisfy these conditions, so we are unable to implement this methodology.<sup>184</sup>

As an alternative that answers a different, but related, question we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African-American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 6.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 6.16, are consistent with the previous analysis; we find that selection is not much of an issue for African-American-owned firms nationally, in the SATL region, or in construction sub-samples, or for Asian-owned firms nationally or in the SATL. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African-American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (see *e.g.* Table 6.8, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 16 percentage points more likely to be denied access to credit, and this difference is statistically significant.

### **G. Analysis of Credit Market Discrimination in the US in 1998**

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the Federal Reserve System.<sup>185</sup> This section updates the several estimates obtained above using the

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<sup>184</sup> The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm's information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

<sup>185</sup> The target population of the survey was for-profit businesses with fewer than 500 employees that were either a single establishment or the headquarters of a multiple establishment company, and were not agricultural firms, financial institutions, or government entities. These firms also had to be in business during December 1998. Data were collected for fiscal year-end 1998. Like its 1993 counterpart, the purpose of this survey was to gather information about small business financial behavior and the use of financial services and financial service providers by these firms. The objectives of the survey were to collect information that can inform researchers and policy makers on the availability of credit to small businesses; the location of the sources of financial services; the types of financial services used, including checking accounts, savings accounts, various types of credit, credit

1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear – African-American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

### 1. Qualitative Evidence

Consistent with the 1993 survey, Table 6.17 shows that African-American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is “financing and interest rates.” In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 6.3 and 6.4) and over the next 12 months (Tables 6.5 and 6.6). Interestingly, even though credit availability was by far the most important category for African-Americans (21 percent in Table 6.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

### 2. Differences in Loan Denial Rates by Race/Ethnicity

In 1998 as in 1993, in comparison with firms owned by non-minority males, minority and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African-American-owned firms in particular, were much less likely to be classified as having a “low risk” credit rating by Dun & Bradstreet.<sup>186</sup>

In the 1993 survey, respondents were asked “During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?” In 1998, a narrower question limited to new loans was asked – “Did the firm apply for new loans in the last three years?” In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and sex is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

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cards, trade credit, and equity injections; as well as the firm’s recent credit acquisition experiences. The survey also investigated the level of debt held by these firms and their accessibility to credit. Additionally, the survey collected information on firm and owner demographics, as well as the firm’s recent income statement and balance sheet.

<sup>186</sup> Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

| Percentage of Loan Applications Denied |       |       |
|--|-------|-------|
|  | 1993  | 1998  |
| Non-minority males                     | 26.2% | 24.4% |
| African-Americans                      | 65.9% | 62.3% |
| Asians, Native Americans, etc.         | 39.9% | 47.0% |
| Hispanics                              | 35.9% | 49.9% |
| Non-minority females                   | 30.1% | 23.5% |
| Overall                                | 28.8% | 28.6% |

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity and gender across the two years. More than half of African-American owners did not apply for a loan for fear of being denied compared with only one out of five non-minority males.

| Percentage Not Applying for Fear of Denial |       |       |
|--|-------|-------|
|  | 1993  | 1998  |
| Non-minority males                         | 22.5% | 20.2% |
| African-Americans                          | 60.7% | 53.9% |
| Asians, Native Americans, etc.             | 27.5% | 23.1% |
| Hispanics                                  | 41.5% | 34.3% |
| Non-minority females                       | 22.7% | 24.2% |
| Overall                                    | 24.7% | 23.3% |

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

- a) Prejudice on a racial/ethnic basis.
- b) Prejudice against women.
- c) Prejudice against the business location.
- d) Prejudice against the business type.
- e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among non-minorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of non-minorities believed prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 6.8 and 6.9 the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that African-American-owned firms were almost twice as likely to have their loans denied than non-minority male-owned firms, even after controlling for a host of

## Statistical Disparities in Capital Markets

variables included primarily to control for the possibility that minority-owned firms are smaller and less creditworthy than those owned by non-minority men.

A similar exercise is performed below in Tables 6.18 and 6.19 using data from the 1998 SSBF. Column (1) in Table 6.18 shows that African-American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than non-minority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993 the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African-Americans to 21.8 in Column (5) as the full set of controls is added. For 1993 the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 6.18 Column (5), Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than non-minority male-owned firms. In Table 6.8, by contrast, denial probabilities for Hispanic-owned firms were *not* significantly different from those of non-minority male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

Table 6.19 focusing on the SATL region yields similar results—showing significantly larger denial probabilities for African-American- and Hispanic-owned firms (24.3 percent and 20.9 percentage points, respectively) than for non-minority male-owned firms. The SATL indicator was not significant in Table 6.19, nor were the interaction terms between SATL and race, ethnicity or gender, indicating that the 1998 loan denial results for the SATL are not significantly different than for the nation as a whole.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

- a) The value of the equity, if any, in the owner's home.
- b) The owner's net worth excluding home equity and equity in the firm.
- c) The firm's 1999 Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.<sup>187</sup>

Despite the fact that these new variables do help to predict loan denials,<sup>188</sup> the estimated race differences including these variables are unchanged from those reported above.<sup>189</sup> This suggests

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<sup>187</sup> The D&B Commercial Credit Score Report predicts the likelihood of a company paying in a delinquent manner (90+ days past terms) during the next 12 months based on the information in D&B's file. The score is intended to help firms decide quickly whether to accept or reject accounts, adjust terms or credit limits, or conduct a more extensive review based on the report D&B provides. Firms can also determine the company's relative ranking among other businesses in the D&B database.

<sup>188</sup> The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk .228 (2.45), average risk= .295 (3.25); significant risk=.319 (3.28); high

that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

### 3. Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans including renewals. Responses in 1998 were as follows:

| Applied for New Loans Last Three Years | Number | Percent |
|--|--------|---------|
| Did not apply                          | 2,599  | 73.0%   |
| Always approved                        | 713    | 20.0%   |
| Always denied                          | 166    | 4.7%    |
| Sometimes approved/sometimes denied    | 83     | 2.3%    |
| Total                                  | 3,561  | 100.0%  |

The dependent variable used in Tables 6.18 and 6.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable – *denylast* – is set to one if the application is always denied, set to zero if always approved. Those responding “sometimes approved/sometimes denied” are excluded from the analysis. Column (1) of Table 6.20 replicates Column (1) of Table 6.18 using *denylast* as the dependent variable with the smaller sub-sample. African-Americans, Hispanics, Asians and non-minority females are all confirmed to face higher denial rates than non-minority males using this specification. For African-Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians, the difference is 19 percentage points, and for non-minority females, 8 percentage points.

Results consistent with discrimination are confirmed for African-Americans and Hispanics in Column (2) of Table 6.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the SATL region are added to the model as in Columns (3) and (4), results for minorities and non-minority females remain statistically significant. Neither the SATL indicator nor any of the interactions between SATL and race, ethnicity or gender is significant.

### 4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Tables 6.21 through 6.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

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risk= .391 (3.53), n=924 pseudo  $r^2=.0253$ . Excluded category ‘low risk’. Results were essentially unchanged when a control for SATL was included.

<sup>189</sup> This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (1999) who performed a similar exercise with the 1993 data.

First, Table 6.21, which is similar to Tables 6.13 and 6.14, finds that conditional on obtaining a loan, African-Americans are charged a higher price for their credit—on average 1.06 percentage points nationally. These results are not significantly different in construction and construction-related industries either.<sup>190</sup> African-Americans in the SATL appear to be no different in this regard than elsewhere in the country.

Table 6.22, which is similar to Table 6.15, shows that African-American owners are much more likely not to apply for a loan fearing they will be denied. Based on all of the foregoing evidence this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as non-minority male-owned firms to have their application rejected. This is evident in the SATL as well and also in the construction and construction-related industries.<sup>191</sup>

Finally, Table 6.23, which is comparable to Tables 6.11 and 6.12, suggests that when the financial institution does not know the race or ethnicity of the applicant – as is often the case in an application for a credit card – there are no differences nationally by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of any race effects in the use of business credit cards in the SATL region (row 3) or in construction (results not reported here).

Our confidence in the strength of our findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the original results. Unfortunately, African-Americans continue to be discriminated against in the market for small business credit. By 1998, this discrimination appears to be on the increase for African-Americans and to be expanding to impact other minority groups, such as Hispanics and Asians, as well. This is an important market failure, and one which governments such as ARC cannot ignore if they are to avoid passive participation in a discriminatory marketplace.

### **H. Analysis of Credit Market Discrimination in the US in 2003**

More recently a new wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System.<sup>192</sup> This is the fourth survey of US small businesses conducted by the Board of Governors since 1987. The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the US at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun & Bradstreet Market Identifier file. The numbers of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

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<sup>190</sup> There is some indication that non-minority females nationally pay slightly less for their loans, but this difference is not quite statistically significant.

<sup>191</sup> There is some evidence of this phenomenon for Hispanics nationally as well. However the coefficient of 0.052 in Row (2) of Table 6.22 is not quite statistically significant.

<sup>192</sup> See [www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html](http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html).



Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves. According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.<sup>193</sup>

In 1998 almost 8 percent of survey respondents were African-American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.<sup>194</sup> Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.<sup>195</sup>

Mach and Wolken (2006) reported using these data that 13.1% of firms were owned by non-minority or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African-Americans and Asians each held roughly constant at 4%: the share of American Indians and Alaska natives held at roughly 1 percent. However the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent which is somewhat surprising given the evidence that Hispanics are a growing share of the US population – up from 12.5 percent in 2000 to 14.5 percent in 2005. The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent.

Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The next section presents our findings from this analysis.<sup>196</sup>

## 1. Qualitative Evidence

Table 6.24 reports the results of asking business owners for the most important problem currently facing their firm. Consistent with the 1993 and 1998 surveys, firms owned by minority and women-owned firms were more likely to say that their most important problem was “financing and interest rates.” Once again the African-American/non-minority difference was most pronounced—only slightly more than 5 percent of non-minority male business owners reported this as their major problem compared to almost 21 percent of African-American business owners.

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<sup>193</sup> See footnote 153, above.

<sup>194</sup> The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For non-minority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

<sup>195</sup> Mach and Wolken (2006, Table 2) report that weighted figures for African-Americans were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively. Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively. Native Americans were 0.8 and 1.3 percent, respectively, and women were 24.3 and 22.4 percent, respectively.

<sup>196</sup> The data file provided by the Board of Governors includes five separate observations per firm. That is to say there are  $4240 \times 5 = 21,200$  observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation: the results presented here are essentially identical whichever imputation is used. Overall only 1.8 percent of observations in the data file were missing.

### 2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 6.25 and 6.26 present estimates of loan denial probabilities for the nation as a whole and for the SATL using a regression model comparable to that which was used with the 1993 and 1998 survey waves.<sup>197</sup>

Column (1) in Table 6.25 (comparable to Table 6.8 for 1993 and 6.18 for 1998) shows that African-American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than non-minority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African-Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for non-minority females and other minority groups are not significant however.

Table 6.26 (comparable to Table 6.9 for 1993 and 6.19 for 1998) focuses on the SATL region yields similar results—showing significantly larger denial probabilities for African-American-owned firms than for non-minority male-owned firms. The SATL indicator as well as the race and gender interaction terms with the SATL are also insignificant.

### 3. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Table 6.27 models the interest rate charged for those minority-owned and non-minority female-owned firms that were able to successfully obtain a loan (comparable to Tables 6.13 and 6.14 for 1993 and Table 6.21 for 1998). As was found in earlier surveys, African-American business owners are hurt here as well since they have to pay, nationally on average, 1.05 percentage points more for their loans than non-minority male business owners with identical characteristics. Hispanic business owners, as well, pay 0.99 percentage points more, nationally on average, than their non-minority male counterparts have to pay.

The loan price differential is present for African-American and Hispanic business owners in the SATL as well. According to the results in Table 6.27, African-American business owners in the SATL may pay 1.1 percentage points more for their loans, on average, than comparable non-minority males. For Hispanics, the differential is 1.04 percentage points.

Table 6.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 6.11 and 6.12 for 1993 and Table 6.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. There is some evidence nationally and in the SATL in 2003 that African-Americans

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<sup>197</sup> In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

and Hispanics are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards.

Finally, consistent with earlier results, Table 6.29 (comparable to Tables 6.15 for 1993 and 6.22 for 1998), shows that African-American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic, and industry factors, African-American business owners are still almost 17 percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit.

In the SATL the phenomenon is evident as well—African-American business owners are 15 percentage points more likely to fail to apply for fear of denial. In construction and related industries, the trend is even more pronounced at 30.3 percentage points. There is evidence of this phenomenon for non-minority female business owners as well in the SATL and in the nation as a whole.

### **I. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007**

NERA has conducted local credit market surveys at nine other times and places across the country since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland<sup>198</sup> in 2000, the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland (again) in 2005,<sup>199</sup> the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys and the Memphis surveys included other goods and services as well.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 6.30, and are remarkably similar to results seen in Tables 6.8-6.9, 6.18-6.19, and 6.25-6.26. Denial probabilities for African-American-owned firms compared to non-minority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

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<sup>198</sup> Including the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

<sup>199</sup> Including (again) the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and non-minority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for non-minority female-owned firms than for their non-minority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (18-19 percentage points higher).

Finally, as shown in Table 6.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 6.13-6.14, 6.21 and 6.27. African-Americans pay almost 170 basis points more, on average, for their business credit than do non-minority males, declining to 150 basis points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF, and the 2003 SSBF.

## J. Conclusions

The results presented in this chapter indicate that African-American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian-owned firms, Native American-owned firms, and non-minority female-owned firms.

As in any regression-based study, our analysis hinges upon the proposition that all the factors that are related to loan denial rates have been included in our statistical model. If, for example, African-American business owners possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To check on this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Moreover, we have also estimated several alternative specifications that could potentially identify the impact of such a bias. Moreover, we have conducted our own surveys on numerous occasions and in numerous places across the US. Throughout, we have consistently found that African-Americans and often other minorities as well are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination.

Another potential criticism is that this study has examined loan denial rates rather than loan default rates; some have claimed that the latter provides a more appropriate strategy for identifying discrimination. For example, if banks only approve loans for relatively good African-American firms then African-American firms should exhibit relatively low default rates. Such an approach has several significant shortcomings that are detailed in Browne and Tootell (1995) and Ladd (1998). For instance, one problem is that it relies on the distribution of default probabilities being similar for African-American and non-minority applicants meeting the acceptance standard used for non-minority firms. A further problem is that it assumes that the loan originators know with a high degree of precision what determines defaults, however little hard information exists

on what causes default. Additionally, it would be hard to disentangle the factors associated with differences in default rates between non-minority- and African-American-owned firms given the fact that the African-American-owned firms which obtain credit are typically charged higher interest rates, as we have demonstrated. Finally, such an analysis would require longitudinal data, tracking firms for several years following loan origination. Such data does not exist. While we have highlighted the potential limitations of such an analysis, we believe that it would be fruitful for this sort of longitudinal data collection to take place and for future research to investigate this question more fully.

In addition, many of the criticisms levied against the home mortgage loan discrimination study of Munnell et al. (1996) could perhaps be used here as well. Yet these criticisms appear to have been effectively countered by, for example, Browne and Tootell (1995) and Tootell (1996). What is important to keep in mind in reference to this work compared with Munnell et al. (1996) is the magnitude of the estimated racial disparity. The absolute size of the raw racial differences found in the mortgage study is considerably smaller than those observed in this study regarding business credit.<sup>200</sup>

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added “distance” in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p.6) point out, “economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others.” A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

Clearly, a portion of the difference in denial rates between non-minority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.<sup>201</sup>

Our analysis finds significant evidence that African-American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect

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<sup>200</sup> In the Boston Fed study 10 percent of non-minority mortgage applications were rejected compared with 28 percent for African-Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for non-minority males and between 50.0 and 65.9 percent for African-American-owned firms (depending on which NSSBF or SSBF survey is used).

<sup>201</sup> The gap in denial rates between African-Americans and non-minorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

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it to be a problem in the future. In fact, these concerns prevented more African-American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African-American-owned firms than for non-minority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for non-minority women as well, although not with as much consistency as the findings for African-Americans.

Overall, the evidence is strong that African-American-owned firms and often other M/WBE firms as well face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are due to discrimination.

## K. Tables

Table 6.1. Selected Population-Weighted Sample Means of Loan Applicants – USA, 1993

|   | All    | Non-minority | African-American | Hispanic | Other Races |
|---|--------|--------------|------------------|----------|-------------|
| % of Firms Denied in the Last Three Years           | 28.8   | 26.9         | 65.9             | 35.9     | 39.9        |
| <i>Credit History of Firm/Owners</i>                |        |              |                  |          |             |
| % Owners with Judgments Against Them                | 4.8    | 4.1          | 16.9             | 5.2      | 15.2        |
| % Firms Delinquent in Business Obligations          | 24.2   | 23.1         | 49.0             | 25.1     | 31.6        |
| % Owners Delinquent on Personal Obligations         | 14.0   | 12.6         | 43.4             | 14.8     | 24.5        |
| % Owners Declared Bankruptcy in Past 7yrs           | 2.4    | 2.4          | 5.3              | 2.0      | 0.8         |
| <i>Other Firm Characteristics</i>                   |        |              |                  |          |             |
| % Female-Owned                                      | 17.9   | 18.1         | 18.2             | 9.7      | 23.1        |
| Sales (in 1,000s of 1992 \$)                        | 1795.0 | 1870.6       | 588.6            | 1361.3   | 1309.1      |
| Profits (in 1,000s of 1992 \$)                      | 86.7   | 84.5         | 59.9             | 189.5    | 54.0        |
| Assets (in 1,000s of 1992 \$)                       | 889.4  | 922.5        | 230.3            | 745.6    | 747.3       |
| Liabilities (in 1,000s of 1992 \$)                  | 547.4  | 572.8        | 146.2            | 308.6    | 486.0       |
| Owner's Years of Experience                         | 18.3   | 18.7         | 15.3             | 15.9     | 14.9        |
| Owner's Share of Business                           | 77.1   | 76.5         | 86.4             | 83.9     | 77.1        |
| % ≤ 8 <sup>th</sup> Grade Education                 | 0.8    | 0.7          | 0.0              | 3.4      | 1.0         |
| % 9 <sup>th</sup> -11 <sup>th</sup> Grade Education | 2.2    | 2.2          | 3.7              | 1.8      | 1.2         |
| % High School Graduate                              | 19.6   | 19.7         | 12.8             | 27.7     | 14.9        |
| % Some College                                      | 28.0   | 28.3         | 36.0             | 20.6     | 19.8        |
| % College Graduate                                  | 29.2   | 29.2         | 28.0             | 24.1     | 36.5        |
| % Postgraduate Education                            | 20.2   | 19.9         | 19.5             | 22.3     | 26.6        |
| % Line of credit                                    | 48.7   | 49.1         | 35.8             | 52.8     | 43.7        |
| Total Full-time Employment in 1990                  | 11.4   | 11.8         | 6.8              | 9.3      | 8.8         |
| Total Full-time Employment in 1992                  | 13.6   | 13.9         | 8.3              | 10.8     | 12.3        |
| Firm age, in years                                  | 13.4   | 13.6         | 11.5             | 13.3     | 9.3         |
| % New Firm Since 1990                               | 9.4    | 9.4          | 13.0             | 6.4      | 9.5         |
| % Firms Located in MSA                              | 76.5   | 75.1         | 91.2             | 90.7     | 85.7        |
| % Sole Proprietorship                               | 32.8   | 32.3         | 48.6             | 38.2     | 24.2        |
| % Partnership                                       | 7.8    | 7.8          | 7.7              | 6.7      | 7.9         |
| % S Corporation                                     | 26.1   | 27.1         | 11.7             | 13.7     | 27.1        |
| % C Corporation                                     | 33.4   | 32.8         | 32.1             | 41.4     | 40.8        |
| % Existing Relationship with Lender                 | 24.6   | 24.7         | 12.8             | 29.6     | 25.7        |
| % Firms with Local Sales Market                     | 54.1   | 54.7         | 42.9             | 55.0     | 47.4        |
| <i>Characteristics of Loan Application</i>          |        |              |                  |          |             |
| Amount Requested (in 1,000s of 1992\$)              | 300.4  | 310.8        | 126.5            | 179.1    | 310.5       |
| % Loans to be Used for Working Capital              | 8.4    | 8.8          | 4.9              | 4.6      | 5.5         |
| % Loans to be Used for Equipment/Machinery          | 2.3    | 2.4          | 1.7              | 0.2      | 0.6         |
| % Loans to be Used for Land/Buildings               | 0.4    | 0.4          | 0.9              | 0.0      | 0.0         |
| % Loan to be Backed by Real Estate                  | 28.3   | 28.6         | 24.7             | 26.2     | 24.7        |
| Sample Size (unweighted)                            | 2,007  | 1,648        | 170              | 96       | 93          |

Source: NERA calculations from 1993 NSSBF.

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Sample restricted to firms that applied for a loan over the preceding three years.

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**Table 6.2. Selected Sample Means of Loan Applicants – SATL 1993**

|   | All    | Non-minority | African-American | Hispanic | Other Races |
|---|--------|--------------|------------------|----------|-------------|
| % of Firms Denied in the Last Three Years           | 29.2   | 26.3         | 69.8             | 50.9     | 33.4        |
| <i>Credit History of Firm/Owners</i>                |        |              |                  |          |             |
| % Owners with Judgments Against Them                | 4.8    | 3.9          | 14.9             | 0.0      | 22.5        |
| % Firms Delinquent in Business Obligations          | 23.3   | 21.4         | 49.2             | 33.4     | 33.6        |
| % Owners Delinquent on Personal Obligations         | 11.4   | 8.5          | 41.1             | 16.5     | 51.3        |
| % Owners Declared Bankruptcy in Past 7yrs           | 2.3    | 2.2          | 6.6              | 0.0      | 0.0         |
| <i>Other Firm Characteristics</i>                   |        |              |                  |          |             |
| % Female-Owned                                      | 18.3   | 17.8         | 29.9             | 9.7      | 28.6        |
| Sales (in 1,000s of 1992 \$)                        | 1727.7 | 1778.4       | 776.3            | 2363.0   | 635.8       |
| Profits (in 1,000s of 1992 \$)                      | 74.5   | 62.5         | 17.5             | 460.1    | 6.8         |
| Assets (in 1,000s of 1992 \$)                       | 1022.3 | 1074.2       | 277.8            | 815.9    | 752.9       |
| Liabilities (in 1,000s of 1992 \$)                  | 645.4  | 675.5        | 197.4            | 650.0    | 340.3       |
| Owner's Years of Experience                         | 19.1   | 19.7         | 15.2             | 10.9     | 16.6        |
| Owner's Share of Business                           | 73.8   | 73.5         | 84.8             | 62.3     | 82.9        |
| % ≤ 8 <sup>th</sup> Grade Education                 | 0.3    | 0.4          | 0.0              | 0.0      | 0.0         |
| % 9 <sup>th</sup> -11 <sup>th</sup> Grade Education | 1.9    | 1.6          | 6.7              | 3.9      | 0.0         |
| % High School Graduate                              | 16.4   | 16.2         | 21.3             | 27.0     | 0.0         |
| % Some College                                      | 28.2   | 29.6         | 25.7             | 18.6     | 0.0         |
| % College Graduate                                  | 32.5   | 31.6         | 31.4             | 29.5     | 67.3        |
| % Postgraduate Education                            | 20.7   | 20.6         | 14.8             | 21.0     | 32.7        |
| % Line of credit                                    | 47.4   | 48.5         | 32.8             | 53.0     | 28.6        |
| Total Full-time Employment in 1990                  | 12.4   | 12.8         | 10.9             | 8.0      | 8.2         |
| Total Full-time Employment in 1992                  | 14.1   | 14.5         | 14.2             | 9.6      | 8.2         |
| Firm age, in years                                  | 13.2   | 13.6         | 10.3             | 9.3      | 10.1        |
| % New Firm Since 1990                               | 4.4    | 3.9          | 11.2             | 12.0     | 0.0         |
| % Firms Located in MSA                              | 80.6   | 80.0         | 89.6             | 92.0     | 72.4        |
| % Sole Proprietorship                               | 23.1   | 23.0         | 45.0             | 4.5      | 20.8        |
| % Partnership                                       | 6.3    | 6.7          | 0.7              | 3.5      | 5.1         |
| % S Corporation                                     | 29.7   | 30.3         | 22.8             | 23.9     | 28.6        |
| % C Corporation                                     | 40.9   | 40.0         | 31.4             | 68.0     | 45.5        |
| % Existing Relationship with Lender                 | 24.0   | 23.8         | 21.7             | 15.9     | 43.6        |
| % Firms with Local Sales Market                     | 49.8   | 50.3         | 42.7             | 30.2     | 72.5        |
| <i>Characteristics of Loan Application</i>          |        |              |                  |          |             |
| Amount Requested (in 1,000s of 1992\$)              | 342.9  | 352.9        | 183.1            | 440.0    | 126.3       |
| % Loans to be Used for Working Capital              | 6.9    | 7.4          | 1.3              | 3.5      | 5.3         |
| % Loans to be Used for Equipment/Machinery          | 3.0    | 3.4          | 0.0              | 0.0      | 0.0         |
| % Loans to be Used for Land/Buildings               | 0.4    | 0.4          | 0.0              | 0.0      | 0.0         |
| % Loan to be Backed by Real Estate                  | 24.6   | 23.9         | 38.5             | 34.4     | 14.7        |
| Total Sample Size (unweighted)                      | 342    | 270          | 45               | 19       | 8           |

Source and Notes: See Table 6.1.



**Table 6.3. Problems Firms Experienced During Preceding 12 Months - USA, 1993**

|  | All   | Non-minority | African-American | Hispanic | Other Races |
|--|-------|--------------|------------------|----------|-------------|
| <i>Credit Market Conditions</i>                                  |       |              |                  |          |             |
| Percent reporting not a problem                                  | 66.2  | 67.3         | 43.1             | 58.9     | 65.8        |
| Percent reporting somewhat of a problem                          | 20.1  | 19.9         | 25.6             | 18.2     | 21.3        |
| Percent reporting serious problem                                | 13.7  | 12.7         | 31.3             | 22.9     | 12.9        |
| <i>Other Potential Problems (% reporting problem is serious)</i> |       |              |                  |          |             |
| Training costs   | 6.5   | 6.6          | 7.2              | 6.3      | 4.3         |
| Worker's compensation costs                                      | 21.7  | 21.0         | 19.3             | 30.6     | 28.7        |
| Health insurance costs   | 32.5  | 31.6         | 38.1             | 44.3     | 35.0        |
| IRS regulation or penalties                                      | 12.3  | 11.8         | 17.1             | 17.9     | 13.2        |
| Environmental regulations  | 8.5   | 8.5          | 5.6              | 7.4      | 11.0        |
| Americans with Disabilities Act                                  | 2.7   | 2.6          | 3.6              | 2.7      | 3.9         |
| Occupational Safety and Health Act                               | 4.5   | 4.5          | 3.9              | 3.6      | 6.2         |
| Family and Medical Leave Act                                     | 2.7   | 2.5          | 4.5              | 3.1      | 4.8         |
| Number of observations (unweighted)                              | 2,007 | 1,648        | 170              | 96       | 93          |

Source: See Table 6.1.

**Table 6.4. Problems Firms Experienced During Preceding 12 Months – SATL, 1993**

|  | All  | Non-minority | African-American | Hispanic | Other Races |
|--|------|--------------|------------------|----------|-------------|
| <i>Credit Market Conditions</i>                                  |      |              |                  |          |             |
| Percent reporting not a problem                                  | 65.3 | 66.8         | 38.4             | 58.9     | 69.2        |
| Percent reporting somewhat of a problem                          | 20.9 | 20.9         | 28.8             | 14.2     | 18.4        |
| Percent reporting serious problem                                | 13.7 | 12.3         | 32.8             | 26.9     | 12.4        |
| <i>Other Potential Problems (% reporting problem is serious)</i> |      |              |                  |          |             |
| Training costs   | 6.5  | 6.5          | 5.4              | 4.8      | 8.4         |
| Worker's compensation costs                                      | 21.5 | 20.5         | 25.1             | 44.0     | 20.1        |
| Health insurance costs   | 29.8 | 27.7         | 39.4             | 44.6     | 50.6        |
| IRS regulation or penalties                                      | 12.7 | 12.3         | 19.1             | 24.3     | 5.0         |
| Environmental regulations  | 9.3  | 10.1         | 6.1              | 2.9      | 2.5         |
| Americans with Disabilities Act                                  | 2.1  | 2.0          | 6.6              | 0.0      | 1.2         |
| Occupational Safety and Health Act                               | 3.4  | 3.2          | 5.7              | 5.3      | 2.7         |
| Family and Medical Leave Act                                     | 2.5  | 2.3          | 7.8              | 1.6      | 1.2         |
| Number of observations (unweighted)                              | 773  | 573          | 112              | 47       | 41          |

Source: See Table 6.1.

## Statistical Disparities in Capital Markets

**Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA, 1993**

|                                      | <b>All</b> | <b>Non-minority</b> | <b>African-American</b> | <b>Hispanic</b> | <b>Other Races</b> |
|--------------------------------------|------------|---------------------|-------------------------|-----------------|--------------------|
| Credit availability                  | 5.9        | 5.5                 | 20.5                    | 5.3             | 4.3                |
| Health care, health insurance        | 21.1       | 22.1                | 12.3                    | 13.7            | 14.8               |
| Taxes, tax policy                    | 5.7        | 5.7                 | 2.6                     | 8.7             | 3.3                |
| General U.S. business conditions     | 11.8       | 11.5                | 8.9                     | 14.4            | 17.4               |
| High interest rates                  | 5.4        | 5.7                 | 1.8                     | 3.5             | 3.4                |
| Costs of conducting business         | 3.3        | 3.3                 | 3.8                     | 3.8             | 3.6                |
| Labor force problems                 | 3.5        | 3.3                 | 3.9                     | 5.5             | 3.6                |
| Profits, cash flow, expansion, sales | 10.3       | 9.9                 | 20.3                    | 9.8             | 11.9               |
| Number of observations (unweighted)  | 4,388      | 3,383               | 424                     | 262             | 319                |

Source: See Table 6.1.

**Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – SATL, 1993**

|                                      | <b>All</b> | <b>Non-minority</b> | <b>African-American</b> | <b>Hispanic</b> | <b>Other Races</b> |
|--------------------------------------|------------|---------------------|-------------------------|-----------------|--------------------|
| Credit availability                  | 7.1        | 6.5                 | 25.1                    | 7.2             | 0.0                |
| Health care, health insurance        | 19.4       | 19.6                | 13.2                    | 17.2            | 21.6               |
| Taxes, tax policy                    | 6.8        | 7.2                 | 2.1                     | 9.5             | 0.0                |
| General U.S. business conditions     | 10.2       | 10.1                | 5.3                     | 15.9            | 13.3               |
| High interest rates                  | 5.5        | 5.8                 | 0.7                     | 1.6             | 6.1                |
| Costs of conducting business         | 4.0        | 4.0                 | 5.8                     | 5.3             | 1.6                |
| Labor force problems                 | 3.9        | 3.7                 | 4.3                     | 9.3             | 2.9                |
| Profits, cash flow, expansion, sales | 8.5        | 7.9                 | 14.0                    | 6.1             | 19.0               |
| Number of observations (unweighted)  | 729        | 544                 | 106                     | 41              | 38                 |

Source: See Table 6.1.

**Table 6.7. Types of Problems Facing Your Business, by Race and Gender – USA, 2005 (%)**

|                           | <b>Non-minority male</b> | <b>Non-minority Female</b> | <b>Minority Male</b> | <b>Minority Female</b> | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> |
|---------------------------|--------------------------|----------------------------|----------------------|------------------------|-------------------------|-----------------|--------------|
| Availability of credit    | 19                       | 23                         | 54                   | 38                     | 46                      | 52              | 34           |
| Rising health care costs  | 60                       | 49                         | 50                   | 41                     | 31                      | 42              | 66           |
| Excessive tax burden      | 49                       | 46                         | 48                   | 42                     | 46                      | 34              | 51           |
| Lack of qualified workers | 37                       | 28                         | 33                   | 17                     | 22                      | 20              | 34           |
| Rising energy costs       | 37                       | 35                         | 36                   | 35                     | 29                      | 34              | 44           |
| Rising costs of materials | 44                       | 47                         | 36                   | 47                     | 53                      | 42              | 32           |
| Legal reform              | 21                       | 15                         | 15                   | 12                     | 11                      | 10              | 17           |
| Number firms              | 415                      | 356                        | 80                   | 81                     | 55                      | 50              | 41           |

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, available at [http://www.uschamber.com/publications/reports/access\\_to\\_capital.htm](http://www.uschamber.com/publications/reports/access_to_capital.htm).

Note: Total percentages may be greater than 100% due to respondents having the option to select multiple choices. Minorities also include 14 firms owned by Native Americans.

## Statistical Disparities in Capital Markets

**Table 6.8. Determinants of Loan Denial Rates – USA, 1993**

|   | (1)              | (2)              | (3)              | (4)              | (5)              |
|---|------------------|------------------|------------------|------------------|------------------|
| African-American                                    | 0.443<br>(11.21) | 0.288<br>(6.84)  | 0.237<br>(5.57)  | 0.235<br>(5.22)  | 0.241<br>(5.13)  |
| Asian   | 0.225<br>(4.21)  | 0.171<br>(3.18)  | 0.140<br>(2.56)  | 0.121<br>(2.15)  | 0.119<br>(2.07)  |
| Native American                                     | -0.016<br>(0.11) | -0.141<br>(1.06) | -0.097<br>(0.71) | -0.052<br>(0.35) | -0.083<br>(0.56) |
| Hispanic  | 0.129<br>(2.62)  | 0.070<br>(1.42)  | 0.067<br>(1.36)  | 0.035<br>(0.70)  | 0.031<br>(0.63)  |
| Non-minority Female                                 | 0.088<br>(2.65)  | 0.048<br>(1.45)  | 0.047<br>(1.45)  | 0.036<br>(1.06)  | 0.033<br>(0.94)  |
| Judgments   |                  | 0.143<br>(2.84)  | 0.129<br>(2.56)  | 0.124<br>(2.40)  | 0.121<br>(2.29)  |
| Firm delinquent                                     |                  | 0.176<br>(6.50)  | 0.178<br>(6.43)  | 0.195<br>(6.77)  | 0.208<br>(7.00)  |
| Personally delinquent                               |                  | 0.161<br>(4.45)  | 0.128<br>(3.56)  | 0.124<br>(3.38)  | 0.119<br>(3.17)  |
| Bankrupt past 7 yrs                                 |                  | 0.208<br>(3.11)  | 0.179<br>(2.68)  | 0.162<br>(2.37)  | 0.167<br>(2.33)  |
| \$1992 profits (*10 <sup>8</sup> )                  |                  | -0.000<br>(0.89) | -0.000<br>(1.64) | -0.000<br>(1.78) | -0.000<br>(1.83) |
| \$1992 sales (*10 <sup>8</sup> )                    |                  | -0.000<br>(3.08) | -0.000<br>(3.38) | -0.000<br>(3.28) | -0.000<br>(3.38) |
| \$1992 assets (*10 <sup>8</sup> )                   |                  | 0.000<br>(0.51)  | 0.000<br>(0.60)  | 0.000<br>(0.40)  | 0.000<br>(0.37)  |
| \$1992 liabilities (*10 <sup>8</sup> )              |                  | 0.000<br>(0.61)  | 0.000<br>(1.11)  | 0.000<br>(1.04)  | 0.000<br>(1.17)  |
| Owner years experience                              |                  | -0.003<br>(2.59) | -0.001<br>(1.30) | -0.002<br>(1.55) | -0.002<br>(1.72) |
| Owners' share of business                           |                  | 0.001<br>(1.91)  | 0.000<br>(0.71)  | 0.000<br>(0.26)  | 0.000<br>(0.30)  |
| Owner's Education (5 indicator variables)           | No               | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)           | No               | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (13 variables)          | No               | No               | Yes              | Yes              | Yes              |
| Region (8 indicator variables)                      | No               | No               | No               | Yes              | Yes              |
| Industry (60 indicator variables)                   | No               | No               | No               | Yes              | Yes              |
| Month /Year of Application (51 indicator variables) | No               | No               | No               | No               | Yes              |
| Type of Financial Institution (16 indicator vars.)  | No               | No               | No               | No               | Yes              |
| N   | 2,007            | 2,007            | 2,006            | 1,985            | 1,973            |
| Pseudo R <sup>2</sup>                               | .0608            | .1412            | .2276            | .2539            | .2725            |
| Chi <sup>2</sup>                                    | 143.6            | 333.4            | 537.3            | 595.4            | 635.8            |
| Log likelihood                                      | -1108.8          | -1013.8          | -911.6           | -874.8           | -848.7           |

Source: See Table 6.1.

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm's inventory, the level of wages and salaries paid to workers, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

**Table 6.9. Determinants of Loan Denial Rates – SATL Region, 1993**

|   | (1)               | (2)              | (3)              | (4)              | (5)              |
|---|-------------------|------------------|------------------|------------------|------------------|
| African-American                                    | 0.452<br>(9.85)   | 0.289<br>(5.94)  | 0.239<br>(4.88)  | 0.235<br>(4.61)  | 0.252<br>(4.72)  |
| Asian   | 0.223<br>(3.98)   | 0.180<br>(3.19)  | 0.142<br>(2.51)  | 0.123<br>(2.11)  | 0.125<br>(2.11)  |
| Native American                                     | 0.007<br>(0.05)   | -0.132<br>(0.94) | -0.094<br>(0.67) | -0.047<br>(0.31) | -0.079<br>(0.52) |
| Hispanic  | 0.104<br>(1.91)   | 0.047<br>(0.88)  | 0.051<br>(0.95)  | 0.021<br>(0.40)  | 0.014<br>(0.25)  |
| Non-minority Female                                 | 0.089<br>(2.45)   | 0.055<br>(1.51)  | 0.060<br>(1.65)  | 0.044<br>(1.18)  | 0.042<br>(1.10)  |
| African-American*SATL                               | -0.027<br>(0.35)  | -0.009<br>(0.11) | -0.013<br>(0.16) | 0.002<br>(0.02)  | -0.030<br>(0.39) |
| Asian/Pacific*SATL                                  | 0.011<br>(0.06)   | -0.069<br>(0.44) | -0.011<br>(0.06) | -0.018<br>(0.10) | -0.052<br>(0.31) |
| Native American*SATL                                |                   |                  |                  |                  |                  |
| Hispanic*SATL                                       | 0.114<br>(0.94)   | 0.107<br>(0.85)  | 0.079<br>(0.61)  | 0.073<br>(0.56)  | 0.095<br>(0.71)  |
| Non-minority Female*SATL                            | -0.006<br>(0.07)  | -0.035<br>(0.43) | -0.062<br>(0.80) | -0.042<br>(0.51) | -0.050<br>(0.61) |
| SATL region   | -0.009<br>(0.270) | 0.012<br>(0.34)  | 0.015<br>(0.43)  | 0.042<br>(0.98)  | 0.046<br>(1.07)  |
| Creditworthiness controls (4 variables)             | No                | Yes              | Yes              | Yes              | Yes              |
| Owner's Education (5 indicator variables)           | No                | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)           | No                | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (13 variables)          | No                | No               | Yes              | Yes              | Yes              |
| Region (7 indicator variables)                      | No                | No               | No               | Yes              | Yes              |
| Industry (60 indicator variables)                   | No                | No               | No               | Yes              | Yes              |
| Month /Year of Application (51 indicator variables) | No                | No               | No               | No               | Yes              |
| Type of Financial Institution (16 indicator vars.)  | No                | No               | No               | No               | Yes              |
| N   | 2006              | 2,006            | 2,005            | 1,984            | 1,972            |
| Pseudo R <sup>2</sup>                               | .0612             | .1416            | .2280            | .2540            | .2728            |
| Chi <sup>2</sup>                                    | 144.54            | 334.27           | 537.91           | 595.43           | 636.45           |
| Log likelihood                                      | -1107.9           | -1013.1          | -910.9           | -874.4           | -848.1           |

Source: See Table 6.1.

Note: Creditworthiness controls are those used in Table 6.8 above.

## Statistical Disparities in Capital Markets

**Table 6.10. Alternative Models of Loan Denials, 1993**

| Specification                            | African-American | African-American* SATL | Asian            | Hispanic         | Non-minority Female | Sample Size |
|--|------------------|------------------------|------------------|------------------|---------------------|-------------|
| All                                      | 0.222<br>(4.76)  | 0.080<br>(0.85)        | 0.080<br>(1.37)  | 0.055<br>(0.97)  | 0.044<br>(1.25)     | 2,006       |
| <i>Organization Type</i>                 |                  |                        |                  |                  |                     |             |
| 1) Proprietorships and Partnerships      | 0.278<br>(3.03)  | 0.039<br>(0.24)        | 0.177<br>(1.51)  | -0.021<br>(0.21) | -0.020<br>(0.29)    | 536         |
| 2) Corporations                          | 0.181<br>(3.36)  | 0.175<br>(1.17)        | 0.050<br>(0.73)  | 0.092<br>(1.25)  | 0.069<br>(1.66)     | 1,457       |
| <i>Age of Firm</i>                       |                  |                        |                  |                  |                     |             |
| 3) 12 Years or Under                     | 0.243<br>(3.80)  | 0.117<br>(1.02)        | 0.150<br>(1.41)  | -0.001<br>(0.01) | 0.029<br>(0.56)     | 1,074       |
| 4) Over 12 Years                         | 0.180<br>(2.56)  | -0.006<br>(0.54)       | 0.068<br>(0.08)  | 0.114<br>(1.39)  | 0.087<br>(1.69)     | 926         |
| <i>1993 Firm Size</i>                    |                  |                        |                  |                  |                     |             |
| 5) Fewer than 10 Employees               | 0.193<br>(2.97)  | 0.078<br>(1.71)        | 0.251<br>(0.92)  | -0.019<br>(0.24) | -0.018<br>(0.34)    | 868         |
| 6) 10 or More Employees                  | 0.245<br>(3.39)  | 0.077<br>(0.65)        | -0.082<br>(0.85) | 0.145<br>(1.61)  | 0.111<br>(2.18)     | 1,132       |
| <i>Intended Use of Loan</i>              |                  |                        |                  |                  |                     |             |
| 7) Working Capital                       | 0.241<br>(4.21)  | 0.176<br>(1.22)        | 0.035<br>(0.47)  | 0.039<br>(0.51)  | 0.041<br>(0.85)     | 1,086       |
| 8) Other Use                             | 0.158<br>(1.93)  | 0.037<br>(0.27)        | 0.167<br>(1.74)  | 0.081<br>(0.94)  | 0.045<br>(0.87)     | 917         |
| <i>Scope of Sales Market</i>             |                  |                        |                  |                  |                     |             |
| 9) Local                                 | 0.108<br>(1.50)  | 0.348<br>(2.06)        | 0.097<br>(1.26)  | 0.007<br>(0.10)  | 0.041<br>(0.78)     | 875         |
| 10) Regional, National, or international | 0.199<br>(4.94)  | -0.013<br>(0.24)       | 0.031<br>(0.65)  | 0.071<br>(1.34)  | 0.031<br>(1.19)     | 1,129       |
| <i>Creditworthiness</i>                  |                  |                        |                  |                  |                     |             |
| 11) No Past Problems                     | 0.244<br>(4.08)  | -0.005<br>(0.05)       | 0.113<br>(1.92)  | 0.039<br>(0.71)  | 0.071<br>(2.06)     | 1,386       |
| 12) One Past Problem                     | 0.282<br>(2.53)  | -0.072<br>(0.36)       | -0.092<br>(0.53) | 0.181<br>(1.10)  | 0.038<br>(0.37)     | 376         |
| 13) More Than One Problem                | 0.273<br>(2.55)  | 0.080<br>(0.85)        | 0.180<br>(0.67)  | 0.257<br>(1.70)  | -0.018<br>(0.09)    | 231         |

Source: See Table 6.1.

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 6.8. The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. Control for SATL also included.

**Table 6.11. Models of Credit Card Use – USA, 1993**

| <b>Specification</b>    | <b>African-American</b> | <b>Asian</b>     | <b>Native American</b> | <b>Hispanic</b>  | <b>Non-minority Female</b> | <b>Sample Size</b> |
|-------------------------|-------------------------|------------------|------------------------|------------------|----------------------------|--------------------|
| 1) Business Credit Card | 0.035<br>(1.35)         | -0.096<br>(3.23) | 0.085<br>(1.00)        | 0.024<br>(0.79)  | 0.018<br>(0.83)            | 4,633              |
| 2) Personal Credit Card | 0.019<br>(0.74)         | -0.019<br>(0.63) | 0.019<br>(0.23)        | -0.042<br>(1.40) | 0.028<br>(1.28)            | 4,633              |

Source: See Table 6.1.

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 6.8 but excluding the loan characteristics. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Other races are excluded due to sample size limitations.

**Table 6.12. Models of Credit Card Use – SATL, 1993**

| <b>Specification</b>    | <b>African-American</b> | <b>Asian</b>     | <b>Native American</b> | <b>Hispanic</b>  | <b>Non-minority Female</b> | <b>Sample Size</b> |
|-------------------------|-------------------------|------------------|------------------------|------------------|----------------------------|--------------------|
| 1) Business Credit Card | 0.028<br>(0.96)         | -0.087<br>(2.78) | 0.098<br>(1.07)        | 0.028<br>(0.83)  | 0.009<br>(0.37)            | 4,633              |
| 2) Personal Credit Card | -0.014<br>(0.48)        | -0.034<br>(1.08) | 0.024<br>(0.26)        | -0.029<br>(0.87) | 0.028<br>(1.17)            | 4,633              |

Source: See Table 6.1.

Notes: See Table 6.11. Control for SATL included.

## Statistical Disparities in Capital Markets

**Table 6.13. Models of Interest Rate Charged – USA, 1993**

| Specification                                     | African-American | Asian            | Native American  | Hispanic        | Non-minority Female | Sample Size |
|---|------------------|------------------|------------------|-----------------|---------------------|-------------|
| 1) All loans (controls as in Column 5, Table 6.8) | 1.034<br>(3.72)  | 0.413<br>(1.37)  | -0.427<br>(0.63) | 0.517<br>(1.97) | 0.025<br>(0.14)     | 1,454       |
| <i>Creditworthiness</i>                           |                  |                  |                  |                 |                     |             |
| 2) No credit problems                             | 1.187<br>(3.27)  | 0.485<br>(1.33)  | 0.910<br>(1.07)  | 0.435<br>(1.48) | 0.129<br>(0.66)     | 1,137       |
| <i>Organization Type</i>                          |                  |                  |                  |                 |                     |             |
| 3) Proprietorships and Partnerships               | 1.735<br>(2.57)  | 0.826<br>(1.03)  | 2.589<br>(0.9)   | 1.008<br>(1.74) | -0.239<br>(0.53)    | 364         |
| 4) Corporations                                   | 0.660<br>(2.04)  | 0.359<br>(1.07)  | -0.585<br>(0.86) | 0.491<br>(1.53) | 0.127<br>(0.66)     | 1,090       |
| <i>1993 Firm Size</i>                             |                  |                  |                  |                 |                     |             |
| 5) Fewer than 10 Employees                        | 1.200<br>(2.58)  | -0.247<br>(0.41) | -0.010<br>(0.01) | 0.783<br>(1.75) | -0.311<br>(1.02)    | 574         |
| 6) 10 or More Employees                           | 0.450<br>(1.15)  | 0.446<br>(1.21)  | -0.197<br>(0.25) | 0.515<br>(1.37) | 0.164<br>(0.77)     | 880         |
| <i>Scope of Sales Market</i>                      |                  |                  |                  |                 |                     |             |
| 7) Local  | 0.751<br>(1.55)  | -0.073<br>(0.13) | 1.773<br>(1.12)  | 0.805<br>(2.05) | 0.324<br>(1.08)     | 633         |
| 8) Regional, National, or International           | 1.544<br>(4.26)  | 1.185<br>(2.93)  | -1.368<br>(1.85) | 0.392<br>(0.96) | -0.163<br>(0.73)    | 821         |

Source: See Table 6.1.

Notes: Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Each line of this table represents a separate regression with all of the control variables as Column (5) of Table 6.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. The sample consists of firms who had applied for a loan and had their application approved. 'No credit problems' means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years and the owner had not been bankrupt in the preceding 7 years.



**Table 6.14. Models of Interest Rate Charged – SATL, 1993**

| <b>Specification</b>                              | <b>African-American</b> | <b>African-American<br/>* SATL</b> | <b>Asian</b>    | <b>Native American</b> | <b>Hispanic</b> | <b>Non-minority Female</b> | <b>Sample Size</b> |
|---|-------------------------|------------------------------------|-----------------|------------------------|-----------------|----------------------------|--------------------|
| 1) All loans (controls as in Column 5, Table 6.8) | 0.974<br>(3.02)         | 0.206<br>(0.35)                    | 0.528<br>(1.69) | -0.959<br>(1.32)       | 0.211<br>(0.73) | -0.017<br>(0.09)           | 1,454              |
| <i>Creditworthiness</i>                           |                         |                                    |                 |                        |                 |                            |                    |
| 2) No credit problems                             | 0.928<br>(2.20)         | 0.927<br>(1.18)                    | 0.512<br>(1.39) | 0.227<br>(0.24)        | 0.008<br>(0.03) | 0.068<br>(0.32)            | 1,137              |
| <i>Organization Type</i>                          |                         |                                    |                 |                        |                 |                            |                    |
| 3) Proprietorships and Partnerships               | 1.338<br>(1.93)         | 6.556<br>(2.23)                    | 0.772<br>(0.94) | 2.284<br>(0.80)        | 0.979<br>(1.69) | -0.391<br>(0.83)           | 364                |
| 4) Corporations                                   | 0.716<br>(1.76)         | -0.119<br>(0.19)                   | 0.399<br>(1.16) | -1.193<br>(1.63)       | 0.027<br>(0.07) | 0.107<br>(0.50)            | 1,090              |
| <i>1993 Firm Size</i>                             |                         |                                    |                 |                        |                 |                            |                    |
| 5) Fewer than 10 Employees                        | 1.076<br>(2.10)         | 0.746<br>(0.64)                    | 0.048<br>(0.08) | -1.371<br>(0.92)       | 0.458<br>(0.97) | -0.488<br>(1.45)           | 574                |
| 6) 10 or More Employees                           | 0.369<br>(0.69)         | 0.152<br>(0.20)                    | 0.454<br>(1.23) | -0.200<br>(0.25)       | 0.535<br>(1.23) | 0.200<br>(0.87)            | 880                |
| <i>Scope of Sales Market</i>                      |                         |                                    |                 |                        |                 |                            |                    |
| 7) Local  | 1.154<br>(2.10)         | -1.663<br>(1.52)                   | 0.189<br>(0.33) | -1.081<br>(0.48)       | 0.541<br>(1.29) | 0.346<br>(1.06)            | 633                |
| 8) Regional, National, or International           | 1.227<br>(2.79)         | 0.943<br>(1.27)                    | 1.153<br>(2.82) | -1.403<br>(1.90)       | 0.003<br>(0.01) | -0.132<br>(0.54)           | 821                |

Source: See Table 6.1.

Notes: See Table 6.13

## Statistical Disparities in Capital Markets

**Table 6.15. Racial Differences in Failing to Apply for Loans Fearing Denial, 1993**

| Specification   | African-American | Asian           | Native American  | Hispanic        | Non-minority Female |
|---|------------------|-----------------|------------------|-----------------|---------------------|
| <b>a) USA</b>   |                  |                 |                  |                 |                     |
| No Other Control Variables<br>(n=4,637)   | 0.405<br>(16.65) | 0.099<br>(3.61) | 0.134<br>(1.72)  | 0.235<br>(8.28) | 0.031<br>(1.54)     |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics)<br>(n=4,633) | 0.257<br>(10.02) | 0.054<br>(1.98) | 0.019<br>(0.27)  | 0.164<br>(5.69) | -0.008<br>(0.38)    |
| <b>b) SATL</b>  |                  |                 |                  |                 |                     |
| No Other Control Variables, except for SATL dummy and race*SATL interactions<br>(n=4,637)                   | 0.405<br>(14.53) | 0.096<br>(3.27) | 0.154<br>(1.83)  | 0.241<br>(7.77) | 0.037<br>(1.67)     |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)    | 0.248<br>(8.52)  | 0.054<br>(1.85) | 0.069<br>(0.85)  | 0.168<br>(5.35) | -0.002<br>(0.07)    |
| <b>c) Construction</b>  |                  |                 |                  |                 |                     |
| No Other Control Variables<br>(n=781)   | 0.350<br>(6.74)  | 0.109<br>(1.27) | -0.087<br>(0.54) | 0.150<br>(2.22) | -0.007<br>(0.12)    |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics) (n=781)      | 0.181<br>(3.67)  | 0.064<br>(0.78) | -0.132<br>(1.00) | 0.039<br>(0.65) | -0.063<br>(1.32)    |

Source: See Table 6.1.

Notes: Reported estimates are Probit derivatives, t-Statistics in parentheses. Sample consists of all firms. Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

Table 6.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit, 1993

| Specification   | African-American | Asian           | Native American  | Hispanic        | Non-minority Female |
|---|------------------|-----------------|------------------|-----------------|---------------------|
| <b>a) USA</b>   |                  |                 |                  |                 |                     |
| No Other Control Variables<br>(n=2,646)   | 0.455<br>(14.84) | 0.298<br>(6.82) | 0.188<br>(1.57)  | 0.297<br>(7.76) | 0.126<br>(4.01)     |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics)<br>(n=2,643) | 0.276<br>(6.93)  | 0.180<br>(3.42) | -0.008<br>(0.06) | 0.165<br>(3.51) | 0.049<br>(1.38)     |
| <b>b) SATL</b>  |                  |                 |                  |                 |                     |
| No Other Control Variables<br>(n=2,646)   | 0.461<br>(13.02) | 0.288<br>(6.19) | 0.191<br>(1.49)  | 0.299<br>(7.13) | 0.142<br>(4.19)     |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics) (n=2,643)    | 0.268<br>(5.85)  | 0.175<br>(3.16) | -0.018<br>(0.12) | 0.159<br>(3.10) | 0.083<br>(2.15)     |
| <b>c) Construction</b>  |                  |                 |                  |                 |                     |
| No Other Control Variables<br>(n=463)   | 0.413<br>(6.12)  | 0.196<br>(1.46) | 0.128<br>(0.36)  | 0.255<br>(2.71) | 0.043<br>(0.51)     |
| Full Set of Control Variables<br>(same as Table 6.8, Column 3 except for loan characteristics)<br>(n=463)   | 0.051<br>(2.86)  | 0.015<br>(0.53) | -0.015<br>(0.41) | 0.019<br>(1.00) | -0.010<br>(1.04)    |

Source: See Table 6.1.

Notes: Reported estimates are Probit derivatives, t-Statistics in parentheses. The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. Dependent variable is unity if the firm failed to obtain credit and zero if the firm applied for credit and had their loan application approved.

## Statistical Disparities in Capital Markets

**Table 6.17. Most Important Problem Facing Your Business Today – USA, 1998**

|                                       | <b>Non-minority male</b> | <b>African-American</b> | <b>Other</b> | <b>Hispanic</b> | <b>Non-minority Female</b> | <b>Total</b> |
|---------------------------------------|--------------------------|-------------------------|--------------|-----------------|----------------------------|--------------|
| Financing and interest rates          | 5.8%                     | 18.2%                   | 10.6%        | 8.1%            | 6.2%                       | 6.8%         |
| Taxes                                 | 7.7%                     | 1.9%                    | 5.3%         | 3.1%            | 6.6%                       | 6.9%         |
| Inflation                             | 0.4%                     | 0.6%                    | 0.0%         | 1.0%            | 0.4%                       | 0.4%         |
| Poor sales                            | 7.0%                     | 5.9%                    | 11.6%        | 7.0%            | 8.3%                       | 7.5%         |
| Cost/availability of labor            | 3.9%                     | 3.3%                    | 2.4%         | 3.5%            | 4.5%                       | 3.9%         |
| Government regulations/red tape       | 7.1%                     | 3.0%                    | 4.8%         | 8.1%            | 6.5%                       | 6.8%         |
| Competition (from larger firms)       | 11.1%                    | 10.7%                   | 10.6%        | 18.4%           | 10.2%                      | 11.3%        |
| Quality of labor                      | 14.4%                    | 11.0%                   | 9.4%         | 8.7%            | 9.1%                       | 12.6%        |
| Cost and availability of insurance    | 2.6%                     | 1.0%                    | 0.8%         | 0.0%            | 2.3%                       | 2.2%         |
| Other                                 | 11.4%                    | 10.0%                   | 8.3%         | 16.0%           | 12.7%                      | 11.7%        |
| Cash flow                             | 4.6%                     | 10.9%                   | 6.3%         | 3.5%            | 3.3%                       | 4.6%         |
| Capital other than working capital    | 1.1%                     | 1.7%                    | 4.1%         | 0.8%            | 1.3%                       | 1.3%         |
| Acquiring and retaining new customers | 3.1%                     | 3.9%                    | 5.0%         | 1.8%            | 3.3%                       | 3.2%         |
| Growth of firm/industry               | 0.9%                     | 1.0%                    | 1.2%         | 0.1%            | 0.4%                       | 0.8%         |
| Overcapacity of firm/industry         | 0.1%                     | 0.0%                    | 0.0%         | 0.3%            | 0.0%                       | 0.1%         |
| Marketing/advertising                 | 2.1%                     | 3.9%                    | 2.5%         | 2.8%            | 3.6%                       | 2.5%         |
| Technology                            | 1.4%                     | 1.2%                    | 1.6%         | 2.6%            | 1.3%                       | 1.5%         |
| Costs, other than labor               | 2.7%                     | 1.8%                    | 2.5%         | 3.6%            | 3.8%                       | 2.9%         |
| Seasonal/cyclical issues              | 1.3%                     | 1.2%                    | 0.7%         | 0.4%            | 0.7%                       | 1.1%         |
| Bill collection                       | 2.8%                     | 2.2%                    | 2.4%         | 2.6%            | 2.8%                       | 2.8%         |
| Too much work/not enough time         | 3.6%                     | 2.2%                    | 4.3%         | 1.4%            | 5.7%                       | 3.9%         |
| No problems                           | 4.6%                     | 4.3%                    | 5.6%         | 5.8%            | 6.4%                       | 5.1%         |
| Not ascertainable                     | 0.4%                     | 0.0%                    | 0.0%         | 0.0%            | 0.7%                       | 0.4%         |

Source: NERA calculations from the 1998 SSBF (n=3561).

Notes: Results are weighted.

Table 6.18. Determinants of Loan Denial Rates - USA, 1998

|  | (1)             | (2)              | (3)              | (4)              | (5)              |
|--|-----------------|------------------|------------------|------------------|------------------|
| African-American                                   | 0.422<br>(7.94) | 0.254<br>(5.36)  | 0.217<br>(5.05)  | 0.192<br>(4.52)  | 0.218<br>(4.74)  |
| Asian  | 0.148<br>(2.54) | 0.129<br>(2.52)  | 0.049<br>(1.25)  | 0.023<br>(0.65)  | 0.028<br>(0.77)  |
| Hispanic   | 0.353<br>(6.44) | 0.269<br>(5.37)  | 0.211<br>(4.69)  | 0.183<br>(4.21)  | 0.171<br>(4.00)  |
| Non-minority Female                                | 0.087<br>(2.22) | 0.049<br>(1.55)  | 0.024<br>(0.96)  | 0.016<br>(0.66)  | 0.011<br>(0.44)  |
| Judgments  |                 | 0.272<br>(4.28)  | 0.249<br>(4.32)  | 0.272<br>(4.47)  | 0.262<br>(4.20)  |
| Firm delinquent                                    |                 | 0.081<br>(2.88)  | 0.115<br>(4.20)  | 0.103<br>(3.88)  | 0.111<br>(4.01)  |
| Personally delinquent                              |                 | 0.092<br>(2.85)  | 0.039<br>(1.59)  | 0.042<br>(1.69)  | 0.045<br>(1.76)  |
| Bankrupt past 7 yrs                                |                 | 0.504<br>(4.48)  | 0.406<br>(3.83)  | 0.392<br>(3.67)  | 0.395<br>(3.64)  |
| \$1998 sales (*10 <sup>8</sup> )                   |                 | -0.000<br>(2.47) | -0.000<br>(0.26) | 0.000<br>(0.02)  | 0.000<br>(0.03)  |
| \$1998 firm equity (*10 <sup>8</sup> )             |                 | 0.000<br>(1.40)  | 0.000<br>(0.46)  | 0.000<br>(0.20)  | 0.000<br>(0.06)  |
| Owner home equity (*10 <sup>8</sup> )              |                 | 0.000<br>(0.52)  | 0.000<br>(1.47)  | 0.000<br>(0.96)  | 0.000<br>(0.90)  |
| Owner net worth (*10 <sup>8</sup> )                |                 | -0.000<br>(1.25) | -0.000<br>(1.28) | -0.000<br>(1.19) | -0.000<br>(1.24) |
| Owner years experience                             |                 | -0.002<br>(1.42) | -0.001<br>(0.49) | -0.000<br>(0.34) | -0.000<br>(0.21) |
| Owners' share of business                          |                 | 0.000<br>(0.75)  | -0.000<br>(0.12) | 0.000<br>(0.03)  | -0.000<br>(0.33) |
| Dun & Bradstreet credit ratings (4)                | No              | Yes              | Yes              | Yes              | Yes              |
| Owner's Education (6 indicator variables)          | No              | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)          | No              | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (1 variable)           | No              | No               | Yes              | Yes              | Yes              |
| Region (8 indicator variables)                     | No              | No               | No               | Yes              | Yes              |
| Industry (8 indicator variables)                   | No              | No               | No               | Yes              | Yes              |
| Year of Application (5 indicator variables)        | No              | No               | No               | No               | Yes              |
| Type of Financial Institution (11 indicator vars.) | No              | No               | No               | No               | Yes              |
| N  | 924             | 924              | 924              | 924              | 905              |
| Pseudo R <sup>2</sup>                              | .1061           | .2842            | .3714            | .3910            | .4015            |
| Chi <sup>2</sup>                                   | 90.0            | 241.1            | 315.1            | 331.8            | 337.8            |
| Log likelihood                                     | -379.3          | -303.7           | -266.7           | -258.3           | -251.7           |

Source: See Table 6.17.

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" includes the size of the loan applied for.

## Statistical Disparities in Capital Markets

**Table 6.19. Determinants of Loan Denial Rates – SATL, 1998**

|  | (1)              | (2)              | (3)              | (4)              | (5)              |
|--|------------------|------------------|------------------|------------------|------------------|
| African-American                                   | 0.471<br>(7.46)  | 0.318<br>(5.38)  | 0.236<br>(4.59)  | 0.217<br>(4.16)  | 0.243<br>(4.35)  |
| Asian  | 0.189<br>(3.00)  | 0.162<br>(2.89)  | 0.072<br>(1.65)  | 0.041<br>(1.05)  | 0.048<br>(1.17)  |
| Hispanic   | 0.381<br>(6.27)  | 0.309<br>(5.46)  | 0.251<br>(4.79)  | 0.223<br>(4.32)  | 0.209<br>(4.13)  |
| Non-minority Female                                | 0.074<br>(1.69)  | 0.049<br>(1.39)  | 0.021<br>(0.75)  | 0.012<br>(0.45)  | 0.004<br>(0.16)  |
| African-American*SATL                              | -0.092<br>(1.42) | -0.072<br>(1.65) | -0.029<br>(0.63) | -0.028<br>(0.64) | -0.027<br>(0.60) |
| Asian*SATL   |                  |                  |                  |                  |                  |
| Hispanic*SATL                                      | -0.080<br>(0.96) | -0.070<br>(1.32) | -0.051<br>(1.28) | -0.047<br>(1.20) | -0.046<br>(1.20) |
| Non-minority Female*SATL                           | 0.050<br>(0.53)  | -0.011<br>(0.18) | 0.001<br>(0.02)  | 0.006<br>(0.11)  | 0.017<br>(0.29)  |
| SATL region  | 0.043<br>(0.94)  | 0.041<br>(1.05)  | 0.040<br>(1.19)  | 0.006<br>(0.13)  | 0.011<br>(0.22)  |
| Creditworthiness Controls (8 variables)            | No               | Yes              | Yes              | Yes              | Yes              |
| Owner's Education (6 indicator variables)          | No               | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)          | No               | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (1 variable)           | No               | No               | Yes              | Yes              | Yes              |
| Region (7 indicator variables)                     | No               | No               | No               | Yes              | Yes              |
| Industry (8 indicator variables)                   | No               | No               | No               | Yes              | Yes              |
| Year of Application (5 indicator variables)        | No               | No               | No               | No               | Yes              |
| Type of Financial Institution (11 indicator vars.) | No               | No               | No               | No               | Yes              |
| N  | 918              | 918              | 918              | 918              | 899              |
| Pseudo R <sup>2</sup>                              | 0.1119           | 0.2893           | 0.3750           | 0.3941           | 0.4052           |
| Chi <sup>2</sup>                                   | 94.67            | 244.85           | 317.33           | 333.51           | 339.91           |
| Log likelihood                                     | -375.8           | -300.7           | -264.5           | -256.4           | -249.5           |

Source: See Table 6.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the 4 other variables included in Column (2) of Table 6.18.

Table 6.20. More Loan Denial Probabilities, 1998

|                             | (1)             | (2)             | (3)              | (4)              |
|-----------------------------|-----------------|-----------------|------------------|------------------|
|                             | <i>Denylast</i> | <i>Denylast</i> | <i>Denylast</i>  | <i>Denylast</i>  |
| African-American            | 0.457<br>(8.00) | 0.246<br>(4.76) | 0.499<br>(7.42)  | 0.271<br>(4.32)  |
| Asian                       | 0.185<br>(2.81) | 0.027<br>(0.65) | 0.231<br>(3.25)  | 0.043<br>(0.93)  |
| Hispanic                    | 0.360<br>(6.28) | 0.171<br>(3.67) | 0.385<br>(6.07)  | 0.206<br>(3.79)  |
| Non-minority Female         | 0.083<br>(2.00) | 0.005<br>(0.20) | 0.068<br>(1.48)  | 0.001<br>(0.04)  |
| African-American*SATL       |                 |                 | -0.091<br>(1.21) | -0.028<br>(0.53) |
| Asian*SATL                  |                 |                 |                  |                  |
| Hispanic*SATL               |                 |                 | -0.078<br>(0.82) | -0.051<br>(1.06) |
| Non-minority Female*SATL    |                 |                 | 0.058<br>(0.57)  | 0.011<br>(0.16)  |
| SATL                        |                 |                 | 0.043<br>(0.87)  | 0.025<br>(0.43)  |
| Creditworthiness Controls   | No              | Yes             | No               | Yes              |
| Owner's Education           | No              | Yes             | No               | Yes              |
| Other Firm Characteristics  | No              | Yes             | No               | Yes              |
| Characteristics of the loan | No              | Yes             | No               | Yes              |
| Region                      | No              | Yes             | No               | Yes              |
| Industry                    | No              | Yes             | No               | Yes              |
| N                           | 846             | 846             | 841              | 841              |
| Pseudo R <sup>2</sup>       | 0.1112          | 0.4265          | 0.1168           | 0.4284           |
| Chi <sup>2</sup>            | 90.94           | 348.71          | 95.23            | 349.41           |
| Log likelihood              | -363.3          | -234.5          | -360.1           | -233.1           |

Source: See Table 6.17.

## Statistical Disparities in Capital Markets

**Table 6.21. Models of Interest Rate Charged, 1998**

| Specification                                      | African-American | African-American<br>*<br>SATL | African-American<br>*<br>Construc-<br>tion | Asian           | Hispanic         | Non-<br>minority<br>Female |
|--|------------------|-------------------------------|--|-----------------|------------------|----------------------------|
| 1a) All Loans (as in Column 5 of Table 6.18) n=765 | 1.064<br>(2.66)  | —                             | —  | 0.559<br>(1.49) | -0.088<br>(0.23) | -0.501<br>(1.93)           |
| 1b) All Loans (as in Column 5 of Table 6.18) n=765 | 1.177<br>(2.22)  | -0.407<br>(0.49)              | 0.251<br>(0.25)                            | 0.639<br>(1.50) | -0.152<br>(0.30) | -0.272<br>(0.92)           |

Source: See Table 6.17.

Notes: Each line of this table represents a separate regression with all of the control variables. The sample consists of firms who had applied for a loan and had their application approved.



Table 6.22. Racial Differences in Failing to Apply for Loans Fearing Denial, 1998

| Specification                           | African-American | Asian            | Hispanic         | Non-minority Female |
|---|------------------|------------------|------------------|---------------------|
| <b>a) U.S.</b>                          |                  |                  |                  |                     |
| No Other Control Variables<br>(n=3,448) | 0.353<br>(11.90) | 0.046<br>(1.48)  | 0.173<br>(5.77)  | 0.051<br>(2.55)     |
| Full Set of Control Variables (n=3,448) | 0.208<br>(7.04)  | -0.012<br>(0.43) | 0.052<br>(1.87)  | 0.011<br>(0.59)     |
| <b>b) SATL region</b>                   |                  |                  |                  |                     |
| No Other Control Variables<br>(n=618)   | 0.389<br>(7.00)  | -0.001<br>(0.01) | 0.122<br>(1.71)  | 0.080<br>(1.58)     |
| Full Set of Control Variables (n=618)   | 0.218<br>(4.21)  | -0.024<br>(0.35) | 0.023<br>(0.40)  | 0.023<br>(0.57)     |
| <b>c) Construction</b>                  |                  |                  |                  |                     |
| No Other Control Variables<br>(n=613)   | 0.371<br>(5.06)  | 0.117<br>(1.43)  | 0.020<br>(0.26)  | 0.122<br>(2.08)     |
| Full Set of Control Variables (n=609)   | 0.273<br>(3.69)  | 0.099<br>(1.32)  | -0.062<br>(1.13) | 0.038<br>(0.74)     |

Source: See Table 6.17.

Note: Reported estimates are Probit derivatives with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.18, except for loan amount, year of application, and type of lender.

## Statistical Disparities in Capital Markets

**Table 6.23. Models of Credit Card Use, 1998**

| Specification                                  | African-American | Asian            | Hispanic         | Non-minority Female | Sample Size |
|--|------------------|------------------|------------------|---------------------|-------------|
| 1) Business Credit Card                        | -0.001<br>(0.02) | -0.038<br>(1.00) | -0.014<br>(0.38) | -0.018<br>(0.72)    | 3,561       |
| 2) Personal Credit Card                        | -0.018<br>(0.54) | 0.016<br>(0.44)  | -0.050<br>(1.42) | 0.012<br>(0.52)     | 3,561       |
| 3) Business Credit Card SATL                   | 0.034<br>(0.49)  | -0.198<br>(1.73) | -0.063<br>(0.7)  | -0.108<br>(1.71)    | 641         |
| 4) Personal Credit Card SATL                   | -0.031<br>(0.47) | 0.018<br>(0.16)  | -0.028<br>(0.32) | 0.091<br>(1.54)     | 641         |
| 3) Business Credit Card Construction & related | 0.056<br>(0.62)  | -0.074<br>(0.70) | 0.087<br>(0.86)  | -0.025<br>(0.35)    | 624         |
| 4) Personal Credit Card Construction & related | 0.003<br>(0.04)  | 0.047<br>(0.46)  | -0.092<br>(1.01) | -0.073<br>(0.99)    | 624         |

Source: See Table 6.17.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.18, except for loan amount, year of application and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size includes all firms. Reported estimates are Probit derivatives with t-statistics in parentheses.

**Table 6.24. Most Important Problem Facing Your Business Today – USA, 2003**

|                                       | <b>Non-minority male</b> | <b>African-American</b> | <b>Other</b> | <b>Hispanic</b> | <b>Non-minority Female</b> | <b>Total</b> |
|---------------------------------------|--------------------------|-------------------------|--------------|-----------------|----------------------------|--------------|
| Financing and interest rates          | 5.4%                     | 20.7%                   | 9.1%         | 5.7%            | 5.8%                       | 6.3%         |
| Taxes                                 | 6.3%                     | 2.4%                    | 4.9%         | 7.7%            | 4.3%                       | 5.7%         |
| Inflation                             | 2.7%                     | 1.0%                    | 2.3%         | 0.5%            | 1.4%                       | 2.3%         |
| Poor sales                            | 17.8%                    | 38.5%                   | 28.9%        | 30.0%           | 22.5%                      | 20.6%        |
| Cost/availability of labor            | 1.5%                     | 0.0%                    | 0.6%         | 1.5%            | 1.5%                       | 1.4%         |
| Government regulations/red tape       | 4.7%                     | 1.0%                    | 5.4%         | 9.6%            | 2.5%                       | 4.5%         |
| Competition (from larger firms)       | 4.0%                     | 2.7%                    | 2.7%         | 3.6%            | 3.6%                       | 3.8%         |
| Quality of labor                      | 7.9%                     | 6.9%                    | 5.0%         | 3.8%            | 6.5%                       | 7.2%         |
| Cost and availability of insurance    | 10.3%                    | 1.8%                    | 3.1%         | 5.2%            | 6.4%                       | 8.6%         |
| Other                                 | 2.6%                     | 1.9%                    | 4.0%         | 2.8%            | 1.6%                       | 2.5%         |
| Cash flow                             | 5.3%                     | 3.4%                    | 9.4%         | 4.1%            | 8.6%                       | 6.0%         |
| Capital other than working capital    | 6.2%                     | 5.1%                    | 4.6%         | 7.1%            | 6.8%                       | 6.3%         |
| Acquiring and retaining new customers | 0.9%                     | 2.7%                    | 0.4%         | 1.1%            | 0.8%                       | 1.0%         |
| Growth of firm/industry               | 1.3%                     | 0.0%                    | 1.0%         | 0.1%            | 0.7%                       | 1.0%         |
| Overcapacity of firm/industry         | 1.6%                     | 0.8%                    | 1.8%         | 0.1%            | 1.1%                       | 1.4%         |
| Marketing/advertising                 | 0.8%                     | 0.8%                    | 0.6%         | 1.6%            | 1.2%                       | 0.9%         |
| Technology                            | 1.2%                     | 2.2%                    | 0.2%         | 0.0%            | 1.3%                       | 1.1%         |
| Costs, other than labor               | 4.2%                     | 2.5%                    | 4.3%         | 1.0%            | 6.1%                       | 4.4%         |
| Seasonal/cyclical issues              | 1.4%                     | 0.7%                    | 1.6%         | 2.3%            | 2.0%                       | 1.6%         |
| Bill collection                       | 2.2%                     | 1.8%                    | 2.4%         | 1.8%            | 3.3%                       | 2.4%         |
| Too much work/not enough time         | 4.9%                     | 1.9%                    | 4.0%         | 2.3%            | 6.2%                       | 4.8%         |
| No problems                           | 1.5%                     | 0.0%                    | 0.7%         | 0.8%            | 1.4%                       | 1.4%         |
| Costs, other than labor               | 1.5%                     | 0.0%                    | 0.7%         | 3.7%            | 1.2%                       | 1.4%         |
| Seasonal/cyclical issues              | 2.2%                     | 1.0%                    | 0.1%         | 3.6%            | 1.0%                       | 1.9%         |
| Bill collection                       | 0.3%                     | 0.0%                    | 0.0%         | 0.0%            | 0.8%                       | 0.4%         |
| Too much work/not enough time         | 0.4%                     | 0.0%                    | 0.7%         | 0.0%            | 0.5%                       | 0.4%         |
| No problems                           | 0.3%                     | 0.4%                    | 0.0%         | 0.0%            | 0.4%                       | 0.3%         |
| Not ascertainable                     | 0.2%                     | 0.0%                    | 1.3%         | 0.0%            | 0.5%                       | 0.3%         |

Source: NERA calculations from the 2003 SSBF (n=4072).

Note: Results are weighted.

## Statistical Disparities in Capital Markets

**Table 6.25. Determinants of Loan Denial Rates - USA, 2003**

|  | (1)             | (2)              | (3)              | (4)              | (5)              |
|--|-----------------|------------------|------------------|------------------|------------------|
| African-American                                   | 0.459<br>(8.38) | 0.136<br>(5.47)  | 0.105<br>(4.80)  | 0.091<br>(5.04)  | 0.094<br>(4.95)  |
| Asian  | 0.055<br>(1.51) | 0.020<br>(1.59)  | 0.009<br>(1.01)  | 0.002<br>(0.49)  | 0.001<br>(0.18)  |
| Hispanic   | 0.067<br>(1.74) | 0.008<br>(0.83)  | 0.004<br>(0.58)  | 0.001<br>(0.30)  | 0.001<br>(0.25)  |
| Native American and Other                          | 0.184<br>(2.22) | 0.061<br>(1.95)  | 0.032<br>(1.47)  | 0.021<br>(1.43)  | 0.021<br>(1.49)  |
| Non-minority Female                                | 0.043<br>(2.17) | 0.003<br>(0.70)  | 0.002<br>(0.49)  | 0.001<br>(0.57)  | 0.002<br>(0.76)  |
| Judgments against owner                            |                 | 0.007<br>(0.66)  | 0.003<br>(0.35)  | 0.003<br>(0.54)  | 0.006<br>(0.90)  |
| Judgments against firm                             |                 | 0.005<br>(1.16)  | 0.005<br>(1.42)  | 0.001<br>(0.54)  | 0.001<br>(0.64)  |
| Firm delinquent                                    |                 | 0.032<br>(3.78)  | 0.021<br>(3.23)  | 0.019<br>(3.89)  | 0.021<br>(4.08)  |
| Personally delinquent                              |                 | -0.007<br>(0.69) | -0.006<br>(1.02) | -0.003<br>(0.82) | -0.002<br>(0.58) |
| Owner Bankrupt past 7 yrs                          |                 | 0.046<br>(1.36)  | 0.041<br>(1.35)  | 0.052<br>(1.81)  | 0.044<br>(1.66)  |
| Firm Bankrupt past 7 yrs                           |                 | 0.000<br>(0.03)  | 0.003<br>(0.37)  | 0.001<br>(0.17)  | -0.001<br>(0.38) |
| \$1998 sales (*10 <sup>8</sup> )                   |                 | -0.000<br>(1.68) | 0.000<br>(0.04)  | 0.000<br>(0.29)  | 0.000<br>(0.51)  |
| \$1998 firm equity (*10 <sup>8</sup> )             |                 | -0.000<br>(2.23) | -0.000<br>(1.03) | -0.000<br>(1.62) | -0.000<br>(1.63) |
| Owner home equity (*10 <sup>8</sup> )              |                 | 0.000<br>(0.28)  | 0.000<br>(0.02)  | -0.000<br>(0.45) | -0.000<br>(0.26) |
| Owner net worth (*10 <sup>8</sup> )                |                 | -0.000<br>(2.97) | -0.000<br>(2.92) | -0.000<br>(3.06) | -0.000<br>(3.26) |
| Owner years experience                             |                 | 0.000<br>(0.31)  | 0.000<br>(1.00)  | 0.000<br>(0.82)  | 0.000<br>(0.62)  |
| Owners' share of business                          |                 | 0.000<br>(0.08)  | 0.000<br>(0.61)  | 0.000<br>(0.38)  | 0.000<br>(0.47)  |
| Dun & Bradstreet credit ratings (4)                | No              | Yes              | Yes              | Yes              | Yes              |
| Owner's Education (6 indicator variables)          | No              | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)          | No              | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (1 variable)           | No              | No               | Yes              | Yes              | Yes              |
| Region (8 indicator variables)                     | No              | No               | No               | Yes              | Yes              |
| Industry (8 indicator variables)                   | No              | No               | No               | Yes              | Yes              |
| Year of Application (5 indicator variables)        | No              | No               | No               | No               | Yes              |
| Type of Financial Institution (11 indicator vars.) | No              | No               | No               | No               | Yes              |
| N  | 1,664           | 1,655            | 1,655            | 1,655            | 1,605            |
| Pseudo R <sup>2</sup>                              | .0850           | .2267            | .2901            | .3336            | .3681            |
| Chi <sup>2</sup>                                   | 74.1            | 192.9            | 246.8            | 283.8            | 310.3            |
| Log likelihood                                     | -399.1          | -328.9           | -301.9           | -283.4           | -266.4           |

Source: See Table 6.24. Notes: "Other firm characteristics" include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, the value of land held by the firm, and total salaries and wages paid. "Characteristics of the loan" includes the size of the loan applied for.

**Table 6.26. Determinants of Loan Denial Rates – SATL, 2003**

|  | (1)             | (2)              | (3)              | (4)              | (5)              |
|--|-----------------|------------------|------------------|------------------|------------------|
| African-American                                   | 0.412<br>(6.44) | 0.111<br>(4.18)  | 0.088<br>(3.74)  | 0.082<br>(4.05)  | 0.083<br>(4.05)  |
| Asian  | 0.051<br>(1.31) | 0.016<br>(1.24)  | 0.007<br>(0.80)  | 0.001<br>(0.26)  | -0.000<br>(0.00) |
| Hispanic   | 0.030<br>(0.70) | -0.002<br>(0.22) | -0.002<br>(0.23) | -0.002<br>(0.59) | -0.002<br>(0.63) |
| Native and Other                                   | 0.206<br>(2.34) | 0.062<br>(1.94)  | 0.035<br>(1.50)  | 0.022<br>(1.43)  | 0.022<br>(1.50)  |
| Non-minority Female                                | 0.054<br>(2.39) | 0.004<br>(0.70)  | 0.002<br>(0.55)  | 0.002<br>(0.63)  | 0.002<br>(0.96)  |
| African-American*SATL                              | 0.053<br>(0.78) | 0.018<br>(0.81)  | 0.011<br>(0.61)  | 0.003<br>(0.34)  | 0.003<br>(0.35)  |
| Asian*SATL   | 0.025<br>(0.27) | 0.018<br>(0.55)  | 0.010<br>(0.38)  | 0.009<br>(0.49)  | 0.009<br>(0.50)  |
| Hispanic-Other*SATL                                | 0.093<br>(1.04) | 0.067<br>(1.55)  | 0.032<br>(1.16)  | 0.032<br>(1.39)  | 0.034<br>(1.40)  |
| Native-Other*SATL                                  |                 |                  |                  |                  |                  |
| Non-minority Female*SATL                           | 0.054<br>(2.39) | 0.004<br>(0.70)  | -0.002<br>(0.19) | -0.001<br>(0.25) | -0.002<br>(0.57) |
| SATL region  | 0.010<br>(0.51) | -0.002<br>(0.35) | -0.001<br>(0.32) | -0.001<br>(0.32) | -0.001<br>(0.38) |
| Creditworthiness (4 variables)                     | No              | Yes              | Yes              | Yes              | Yes              |
| Dun & Bradstreet credit ratings (4 variables)      | No              | Yes              | Yes              | Yes              | Yes              |
| Balance Sheet (4 indicator variables)              | No              | Yes              | Yes              | Yes              | Yes              |
| Owner Experience (1 indicator variable)            | No              | Yes              | Yes              | Yes              | Yes              |
| Owner's Share of Business (1 indicator variable)   | No              | Yes              | Yes              | Yes              | Yes              |
| Owner's Education (6 indicator variables)          | No              | Yes              | Yes              | Yes              | Yes              |
| Other Firm Characteristics (17 variables)          | No              | No               | Yes              | Yes              | Yes              |
| Characteristics of the Loan (1 variable)           | No              | No               | Yes              | Yes              | Yes              |
| Region (7 indicator variables)                     | No              | No               | No               | Yes              | Yes              |
| Industry (8 indicator variables)                   | No              | No               | No               | Yes              | Yes              |
| Year of Application (5 indicator variables)        | No              | No               | No               | No               | Yes              |
| Type of Financial Institution (11 indicator vars.) | No              | No               | No               | No               | Yes              |
| N  | 1,663           | 1,654            | 1,654            | 1,654            | 1,604            |
| Pseudo R <sup>2</sup>                              | 0.0897          | 0.2307           | 0.2926           | 0.3367           | 0.3719           |
| Chi <sup>2</sup>                                   | 78.25           | 196.16           | 248.84           | 286.32           | 313.48           |
| Log likelihood                                     | -397.0          | -327.2           | -300.8           | -282.1           | -264.7           |

Source: See Table 6.24.

Notes: t-statistics in parentheses. Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. For other variables, see notes for Table 6.25.

**Table 6.27. Models of Interest Rate Charged, 2003**

| Specification   | African-American | African-American * SATL | African-American * Construction | Asian           | Hispanic        | Native and Other | Non-minority Female |
|---|------------------|-------------------------|---------------------------------|-----------------|-----------------|------------------|---------------------|
| 1a) All Loans (as in Column 5 of Table 6.25)<br>n=1,537 | 1.046<br>(2.02)  |                         |                                 | 0.430<br>(1.20) | 0.991<br>(2.72) | 0.260<br>(0.35)  | -0.148<br>(0.75)    |
| 1b) All Loans (as in Column 5 of Table 6.26)<br>n=1,537 | 1.101<br>(1.72)  | -0.187<br>(0.16)        | -0.162<br>(0.12)                | 0.486<br>(1.16) | 1.044<br>(2.22) | 0.480<br>(0.51)  | -0.185<br>(0.77)    |

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with all of the control variables as indicated. Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. The sample consists of firms who had applied for a loan and had their application approved.

**Table 6.28. Models of Credit Card Use, 2003**

| <b>Specification</b>         | <b>African-American</b> | <b>Asian</b>     | <b>Hispanic</b>  | <b>Native American and Other</b> | <b>Non-minority Female</b> | <b>Sample Size</b> |
|------------------------------|-------------------------|------------------|------------------|----------------------------------|----------------------------|--------------------|
| 1) Business Credit Card      | -0.060<br>(1.13)        | 0.040<br>(0.91)  | 0.004<br>(0.08)  | -0.001<br>(0.01)                 | 0.002<br>(0.07)            | 3,676              |
| 2) Personal Credit Card      | -0.132<br>(2.68)        | 0.036<br>(0.84)  | -0.080<br>(1.77) | -0.040<br>(0.48)                 | 0.036<br>(1.56)            | 3,676              |
| 3) Business Credit Card SATL | -0.057<br>(0.57)        | 0.096<br>(0.94)  | -0.013<br>(0.13) | —                                | -0.011<br>(0.20)           | 655                |
| 4) Personal Credit Card SATL | -0.185<br>(2.04)        | -0.149<br>(1.52) | -0.271<br>(2.86) | —                                | 0.056<br>(1.00)            | 646                |

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.27, except for loan amount, year of application, and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Reported estimates are Probit derivatives with t-statistics in parentheses.

## Statistical Disparities in Capital Markets

**Table 6.29. Racial Differences in Failing to Apply for Loans Fearing Denial, 2003**

| Specification                              | African-American | Asian            | Hispanic         | Native American and Other | Non-minority Female |
|--|------------------|------------------|------------------|---------------------------|---------------------|
| <b>a) U.S.</b>                             |                  |                  |                  |                           |                     |
| No Other Control Variables<br>(n=3,704)    | 0.385<br>(9.48)  | 0.059<br>(1.95)  | 0.138<br>(4.01)  | 0.138<br>(2.14)           | 0.072<br>(4.47)     |
| Full Set of Control Variables<br>(n=3,676) | 0.166<br>(4.73)  | 0.038<br>(1.40)  | 0.050<br>(1.82)  | 0.052<br>(1.01)           | 0.035<br>(2.46)     |
| <b>b) SATL region</b>                      |                  |                  |                  |                           |                     |
| No Other Control Variables<br>(n=3,704)    | 0.357<br>(7.22)  | 0.060<br>(1.80)  | 0.115<br>(2.98)  | 0.126<br>(1.91)           | 0.088<br>(4.93)     |
| Full Set of Control Variables<br>(n=3,676) | 0.152<br>(3.59)  | 0.036<br>(1.19)  | 0.033<br>(1.06)  | 0.046<br>(0.88)           | 0.046<br>(2.90)     |
| <b>c) Construction</b>                     |                  |                  |                  |                           |                     |
| No Other Control Variables<br>(n=705)      | 0.492<br>(4.34)  | -0.022<br>(0.29) | 0.090<br>(1.22)  | 0.258<br>(2.17)           | 0.026<br>(0.64)     |
| Full Set of Control Variables<br>(n=695)   | 0.303<br>(3.16)  | 0.002<br>(0.04)  | -0.009<br>(0.34) | 0.137<br>(1.65)           | -0.002<br>(0.11)    |

Source: See Table 6.24.

Note: Reported estimates are Probit derivatives with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.25, except for loan amount, year of application, and type of lender. In Panel (b), interaction terms between race, sex, and SATL were all insignificant, with the exception of the interaction between white female and SATL in the model with no other controls.



**Table 6.30. Determinants of Loan Denial Rates – Nine Jurisdictions**

|                       | (1)                            | (2)                     |
|-----------------------|--------------------------------|-------------------------|
|                       | <i>Most Recent Application</i> | <i>Last Three Years</i> |
| African-American      | 0.289<br>(8.2)                 | 0.293<br>(7.60)         |
| Hispanic              | 0.178<br>(3.86)                | 0.244<br>(4.59)         |
| Native American       | 0.087<br>(1.69)                | 0.188<br>(3.29)         |
| Asian                 | 0.042<br>(0.72)                | 0.003<br>(0.05)         |
| Other race            | 0.313<br>(3.07)                | 0.364<br>(3.15)         |
| Non-minority female   | 0.046<br>(1.83)                | 0.086<br>(2.96)         |
| Judgments             | 0.051<br>(1.23)                | 0.119<br>(2.24)         |
| Firm delinquent       | 0.022<br>(2.7)                 | 0.057<br>(5.90)         |
| Personally delinquent | 0.076<br>(7.38)                | 0.077<br>(6.03)         |
| Bankrupt past 3yrs    | 0.228<br>(3.99)                | 0.328<br>(4.74)         |
| N                     | 1,855                          | 1,855                   |
| Pseudo R <sup>2</sup> | .1905                          | .1721                   |
| Chi <sup>2</sup>      | 336.0                          | 363.3                   |

Source: NERA Credit Market Surveys, 1999-2007.

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Indicator variables are also included for the various jurisdictions.

## Statistical Disparities in Capital Markets

**Table 6.31. Determinants of Interest Rates – Nine Jurisdictions**

|   | (1)              | (2)              |
|---|------------------|------------------|
| African-American                                  | 1.683<br>(3.44)  | 1.491<br>(2.98)  |
| Asian   | 1.221<br>(2.16)  | 0.789<br>(1.34)  |
| Hispanic  | 0.820<br>(1.48)  | 0.895<br>(1.56)  |
| Native American                                   | 1.241<br>(1.52)  | 1.008<br>(1.24)  |
| Other race  | -1.115<br>(0.63) | -1.072<br>(0.61) |
| Non-minority female                               | 0.046<br>(0.16)  | 0.018<br>(0.06)  |
| Judgments   |                  | 0.537<br>(0.85)  |
| Firm delinquent                                   |                  | -0.041<br>(0.36) |
| Personally delinquent                             |                  | 0.644<br>(3.65)  |
| Bankrupt past 3yrs                                |                  | 1.184<br>(1.13)  |
| Creditworthiness, Firm, and Owner Characteristics | No               | Yes              |
| Loan Characteristics                              | Yes              | Yes              |
| N   | 1,490            | 1,463            |
| Adjusted R <sup>2</sup>                           | .0831            | .1046            |
| F   | 11.4             | 11.05            |

Source: See Table 6.30.

Notes: Reported estimates are OLS regression models, t-statistics are in parentheses. Source: NERA Credit Market Surveys, 1999-2007. Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application. Seven additional indicators for jurisdiction are also included.





## VII. M/WBE Utilization and Disparity in ARC's Markets

### A. Introduction

The *Croson* decision and its progeny have held that statistical evidence of race-based or gender-based disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious or gender-conscious requirements for M/WBE participation in contracting and procurement. Chapters V and VI documented the extent of disparity facing minority- and women- owned firms in the private sector of the local area economy, where contracting and procurement activity is generally *not* subject to such requirements. In this Chapter we examine whether there is statistical evidence of disparities in the contracting and procurement activities supported by ARC.

To determine whether M/WBEs have been underutilized in the public sector we should ideally examine public expenditures that were *not* subject to affirmative action requirements. However, until the recent injunction, ARC has had a longstanding policy of pursuing affirmative action programs in contracting and procurement.<sup>202</sup>

Given the history of ARC's M/WBE policies, ARC's own data might not have shown evidence of underutilization, even if such underutilization exists in the private sector. Instead, ARC's data, in our view, is most useful for examining the effectiveness of their M/WBE policies during the study time period. On the other hand, of course, if actual ARC M/WBE utilization still turns out to be significantly less than M/WBE availability in certain procurement categories, then ARC's data will still provide evidence of adverse disparities.

The statistical evidence reported in Chapter III has already established from which specific industries ARC buys the goods and services it requires as well as from which geographic areas it draws the majority of its prime contractors and subcontractors from. In addition, the statistical evidence reported in Chapter IV has established what percentage of all firms in ARC's geographic and product markets are M/WBEs.

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<sup>202</sup> See Chapter I, Section B, for a summary of ARC's historical M/WBE policies.

This Chapter will document:

- To what extent ARC has utilized M/WBEs in its contracting and subcontracting opportunities during the study period;
- Whether M/WBEs have been utilized to the extent that they are available in the relevant marketplace.

We report this information for Construction, CRS, Services, and Commodities, and for all four of these procurement categories combined. All results are reported by race and sex as well as for all M/WBEs combined.

### **B. M/WBE Utilization**

For this Study, we examined 1,269 prime contracts and 898 associated subcontracts covering a five-year time period and with a total value of approximately \$341.3 million. NAICS codes, M/WBE status, and detailed race and sex status for the prime contractors and subcontractors included in the master contract/subcontract database were established through extensive computer-assisted cross-referencing of firms in our database with firms in (a) the master directory of M/WBEs assembled for this study, (b) Dun & Bradstreet's *Marketplace*, (c) company profiles drawn from American Business Information, Hoover's, Standard & Poors, and other sources, and (d) the results of our race/sex misclassification/non-classification surveys.

During the study period, as a group, we found that M/WBEs earned 5.9 percent of all ARC contract and subcontract dollars in Construction, 28.7 percent of all contract and subcontract dollars in CRS, 7.5 percent of all contract and subcontract dollars in Services, and 1.2 percent of all contract and subcontract dollars in Commodities. Altogether, M/WBEs earned 6.9 percent of all contract and subcontract dollars during the five-year study period.

Table 7.1 details the key results of our analysis of M/WBE participation at ARC. For minority-owned M/WBEs (i.e. M/WBEs other than non-minority women), utilization was 4.0 percent in Construction, 27.9 percent in CRS, 5.9 percent in Services, 1.5 percent in Commodities, and 5.4 percent overall.

Overall among M/WBEs, firms owned by African-Americans earned the largest fraction of ARC contracting and subcontracting dollars (3.9 percent), followed in descending order by firms owned by non-minority women (1.6 percent), firms owned by Hispanics (0.74 percent), firms owned by Native Americans (0.37 percent), and firms owned by Asians (0.30 percent).

Tables 7.2 through 7.5 provide utilization statistics by NAICS Industry Sub-Sector group (three-digit NAICS code) for each race and sex group in the Study. Tables 7.6 through 7.9 provide similar utilization statistics by NAICS Industry Group (four-digit NAICS code).<sup>203</sup>

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<sup>203</sup> Comparable statistics were calculated at the NAICS Industry level as well (five-digit and six-digit NAICS). In the interest of space, these results are not reported here. Four-digit NAICS codes are most comparable to four-digit Standard Industrial Classification (SIC) codes, which were used prior to the advent of the NAICS system.

## C. Disparity Analysis

We turn next to a comparison between our estimates of M/WBE utilization in ARC's own contracting and subcontracting activities and our estimates of M/WBE availability in ARC's geographic and product market area.

Table 7.10 presents the results of this comparison for ARC's contracting and procurement as a whole.

The figures in the utilization column in this table are the same as those from Table 7.1 and include both prime contract and subcontract dollars. The figures in the availability column are the same as those in Table 4.17.

The disparity ratio, in the final column of Table 7.10, is derived by dividing utilization by availability and multiplying the result by 100. A disparity ratio below 100 indicates that M/WBEs are participating in ARC contracting and subcontracting at a level that is less than their estimated availability in the relevant marketplace. A disparity ratio of 80 or lower is considered to be large. A disparity ratio is said to be adverse and statistically significant if it is less than or equal to 80 and unlikely to be caused by chance alone.

For ARC, disparity ratios are less than 0.80 in 30 of 35 cases examined in Table 7.10.

In Construction, statistically significant adverse disparities are observed for MBEs overall and M/WBEs overall. In CRS, statistically significant adverse disparities are observed for non-minority female-owned firms. In Services, statistically significant adverse disparities are observed for non-minority female-owned firms and for M/WBEs as a whole. In Commodities, statistically significant adverse disparities are observed for African-American-owned firms, Asian-owned firms, non-minority female-owned firms, MBE firms as a whole, and M/WBE firms as a whole.

Tables 7.11 through 7.14 present disaggregated disparity results by NAICS Industry Sub-Sector. Adverse disparities are observed among all minority and sex groups and in a wide variety of industry categories.<sup>204</sup>

## D. Current versus Expected Availability

Finally, Table 7.15 provides a comparison between current levels of M/WBE availability for ARC and levels that we would expect to observe in a race- and gender-neutral marketplace. The latter, referred to as "expected availability," is derived by dividing the current availability figures, as documented in Table 4.17, by the disparity ratios documented in column (3) of Table 5.21. If no disparity is present in the relevant marketplace, the disparity ratio will be equal to 100 and expected availability will be equivalent to current availability. In cases where adverse disparities are present in the relevant marketplace, the disparity ratio will be less than 100 and, consequently, expected availability will exceed current availability.<sup>205</sup> In 26 of 35 cases

<sup>204</sup> Disparity tests were also carried out at the NAICS Industry Group and NAICS Industry level, with similar results to those observed at the Industry Sub-Sector level. In the interest of space, these results are not reported here.

<sup>205</sup> For additional information see the discussion above at pages 101-102 and footnote 148.

## **M/WBE Utilization and Disparity in ARC's Markets**

examined in Table 7.15 expected M/WBE availability in the Augusta area exceeds current M/WBE availability.



## E. Tables

Table 7.1. M/WBE Utilization at ARC, 2003-2007

| M/WBE Type       | Procurement Category |            |              |                 |             |
|------------------|----------------------|------------|--------------|-----------------|-------------|
|                  | Construction (%)     | CRS (%)    | Services (%) | Commodities (%) | Overall (%) |
| African-American | 3.04                 | 18.99      | 4.15         | 1.51            | 3.94        |
| Hispanic         | 0.34                 | 6.87       | 0.66         | 0.00            | 0.74        |
| Asian            | 0.41                 | 0.00       | 0.00         | 0.00            | 0.30        |
| Native American  | 0.21                 | 2.08       | 1.14         | 0.00            | 0.37        |
| Minority total   | 4.01                 | 27.94      | 5.95         | 1.51            | 5.35        |
| Non-minority     | 1.90                 | 0.71       | 1.52         | 0.37            | 1.57        |
| Females          |                      |            |              |                 |             |
| M/WBE Total      | 5.91                 | 28.65      | 7.47         | 1.88            | 6.92        |
| Non-M/WBE Total  | 94.09                | 71.35      | 92.53        | 98.12           | 93.08       |
| Total (%)        | 100.00               | 100.00     | 100.00       | 100.00          | 100.00      |
| Total (\$)       | 308,753,907          | 28,380,493 | 28,352,296   | 63,698,292      | 429,184,988 |

Source: NERA Master Contract/Subcontract Database.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.2. Construction—M/WBE Utilization by Industry Sub-Sector (Percentages), 2003-2007**

| <b>Industry Sub-Sector</b>                                   | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Non-minority female</b> | <b>M/WBE</b> | <b>Non-M/WBE</b> |
|--|-------------------------|-----------------|--------------|------------------------|----------------------------|--------------|------------------|
| Construction of Buildings (NAICS 236)                        | 0.10                    | 0.00            | 0.00         | 0.00                   | 0.11                       | 0.21         | 99.79            |
| Heavy and Civil Engineering Construction (NAICS 237)         | 2.38                    | 0.00            | 0.00         | 0.00                   | 0.15                       | 2.53         | 97.47            |
| Specialty Trade Contractors (NAICS 238)                      | 11.40                   | 1.80            | 2.85         | 1.53                   | 4.67                       | 22.25        | 77.75            |
| Merchant Wholesalers, Durable Goods (NAICS 423)              | 0.36                    | 0.00            | 0.00         | 0.00                   | 4.99                       | 5.35         | 94.65            |
| Professional, Scientific, and Technical Services (NAICS 541) | 9.69                    | 1.49            | 0.00         | 0.00                   | 14.01                      | 25.19        | 74.81            |
| Machinery Manufacturing (NAICS 333)                          | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Waste Management and Remediation Services (NAICS 562)        | 2.49                    | 2.48            | 1.90         | 0.00                   | 31.63                      | 38.51        | 61.49            |
| Truck Transportation (NAICS 484)                             | 53.59                   | 0.00            | 0.00         | 0.00                   | 18.70                      | 72.29        | 27.71            |
| Administrative and Support Services (NAICS 561)              | 27.42                   | 0.00            | 0.52         | 0.00                   | 1.61                       | 29.55        | 70.45            |
| Mining (except Oil and Gas) (NAICS 212)                      | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Nonmetallic Mineral Product Manufacturing (NAICS 327)        | 0.00                    | 2.28            | 0.00         | 0.00                   | 7.11                       | 9.39         | 90.61            |
| Fabricated Metal Product Manufacturing (NAICS 332)           | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Plastics and Rubber Products Manufacturing (NAICS 326)       | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Merchant Wholesalers, Nondurable Goods (NAICS 424)           | 0.00                    | 0.00            | 0.00         | 0.00                   | 23.47                      | 23.47        | 76.53            |
| Furniture and Home Furnishings Stores (NAICS 442)            | 0.00                    | 0.00            | 0.00         | 0.00                   | 6.59                       | 6.59         | 93.41            |
| Rental and Leasing Services (NAICS 532)                      | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |

## M/WBE Utilization and Disparity in ARC's Markets

| <b>Industry Sub-Sector</b>   | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Non-minority female</b> | <b>M/WBE</b> | <b>Non-M/WBE</b> |
|--|-------------------------|-----------------|--------------|------------------------|----------------------------|--------------|------------------|
| Miscellaneous Store Retailers (NAICS 453)                                | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.13                       | 0.13         | 99.87            |
| Wood Product Manufacturing (NAICS 321)                                   | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Repair and Maintenance (NAICS 811)                                       | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.25                       | 0.25         | 99.75            |
| Miscellaneous Manufacturing (NAICS 339)                                  | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Telecommunications (NAICS 517)   | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Building Material and Garden Equipment and Supplies Dealers (NAICS 444)  | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Furniture and Related Product Manufacturing (NAICS 337)                  | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Textile Mills (NAICS 313)  | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Insurance Carriers and Related Activities (NAICS 524)                    | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Transportation Equipment Manufacturing (NAICS 336)                       | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Nonstore Retailers (NAICS 454)   | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Chemical Manufacturing (NAICS 325)                                       | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Couriers and Messengers (NAICS 492)                                      | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335) | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Textile Product Mills (NAICS 314)  | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Food Services and Drinking Places (NAICS 722)                            | 0.00                    | 0.00            | 0.00         | 0.00                   | 100.00                     | 100.00       | 0.00             |
| Clothing and Clothing Accessories Stores (NAICS 448)                     | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |

## M/WBE Utilization and Disparity in ARC's Markets

| <b>Industry Sub-Sector</b>                | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Non-minority female</b> | <b>M/WBE</b> | <b>Non-M/WBE</b> |
|---|-------------------------|-----------------|--------------|------------------------|----------------------------|--------------|------------------|
| Real Estate (NAICS 531)                   | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| Personal and Laundry Services (NAICS 812) | 0.00                    | 0.00            | 0.00         | 0.00                   | 0.00                       | 0.00         | 100.00           |
| <i>CONSTRUCTION</i>                       | <i>3.04</i>             | <i>0.34</i>     | <i>0.41</i>  | <i>0.21</i>            | <i>1.90</i>                | <i>5.91</i>  | <i>94.09</i>     |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.3. CRS—M/WBE Utilization by Industry Sub-Sector (Percentages) , 2003-2007**

| Industry Sub-Sector  | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE        | Non-M/WBE    |
|--|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Professional, Scientific, and Technical Services (NAICS 541) | 20.97            | 7.60        | 0.00        | 0.00            | 0.71                | 29.28        | 70.72        |
| Specialty Trade Contractors (NAICS 238)                      | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Waste Management and Remediation Services (NAICS 562)        | 0.00             | 0.00        | 0.00        | 100.00          | 0.00                | 100.00       | 0.00         |
| Administrative and Support Services (NAICS 561)              | 8.60             | 0.00        | 0.00        | 0.00            | 0.00                | 8.60         | 91.40        |
| Insurance Carriers and Related Activities (NAICS 524)        | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Merchant Wholesalers, Durable Goods (NAICS 423)              | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Food Services and Drinking Places (NAICS 722)                | 0.00             | 0.00        | 0.00        | 0.00            | 100.00              | 100.00       | 0.00         |
| <i>CRS</i>   | <i>18.99</i>     | <i>6.87</i> | <i>0.00</i> | <i>2.08</i>     | <i>0.71</i>         | <i>28.65</i> | <i>71.35</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.4. Services—M/WBE Utilization by Industry Sub-Sector (Percentages), 2003-2007**

| Industry Sub-Sector  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Professional, Scientific, and Technical Services (NAICS 541) | 3.50             | 1.10     | 0.00  | 0.00            | 0.35                | 4.95  | 95.05     |
| Merchant Wholesalers, Durable Goods (NAICS 423)              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Publishing Industries (except Internet) (NAICS 511)          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Specialty Trade Contractors (NAICS 238)                      | 3.53             | 0.00     | 0.00  | 0.00            | 0.00                | 3.53  | 96.47     |
| Machinery Manufacturing (NAICS 333)                          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Rental and Leasing Services (NAICS 532)                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Administrative and Support Services (NAICS 561)              | 0.00             | 0.00     | 0.00  | 0.00            | 60.37               | 60.37 | 39.63     |
| Computer and Electronic Product Manufacturing (NAICS 334)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Construction of Buildings (NAICS 236)                        | 99.95            | 0.00     | 0.00  | 0.00            | 0.00                | 99.95 | 0.05      |
| Waste Management and Remediation Services (NAICS 562)        | 0.00             | 0.00     | 0.00  | 93.26           | 0.00                | 93.26 | 6.74      |
| Telecommunications (NAICS 517)                               | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Data Processing, Hosting and Related Services (NAICS 518)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Heavy and Civil Engineering Construction (NAICS 237)         | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Electronics and Appliance Stores (NAICS 443)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Textile Product Mills (NAICS 314)                            | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Truck Transportation (NAICS 484)                             | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Sub-Sector | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE       | Non-M/WBE    |
|---------------------|------------------|-------------|-------------|-----------------|---------------------|-------------|--------------|
| <i>SERVICES</i>     | <i>4.15</i>      | <i>0.66</i> | <i>0.00</i> | <i>1.14</i>     | <i>1.52</i>         | <i>7.47</i> | <i>92.53</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.5. Commodities—M/WBE Utilization by Industry Sub-Sector (Percentages), 1999-2005**

| Industry Sub-Sector  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Merchant Wholesalers, Nondurable Goods (NAICS 424)           | 1.90             | 0.00     | 0.00  | 0.00            | 0.38                | 2.28  | 97.72     |
| Merchant Wholesalers, Durable Goods (NAICS 423)              | 0.71             | 0.00     | 0.00  | 0.00            | 0.31                | 1.02  | 98.98     |
| Motor Vehicle and Parts Dealers (NAICS 441)                  | 4.62             | 0.00     | 0.00  | 0.00            | 0.00                | 4.62  | 95.38     |
| Computer and Electronic Product Manufacturing (NAICS 334)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Heavy and Civil Engineering Construction (NAICS 237)         | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Electronics and Appliance Stores (NAICS 443)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Professional, Scientific, and Technical Services (NAICS 541) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Specialty Trade Contractors (NAICS 238)                      | 2.18             | 0.00     | 0.00  | 0.00            | 0.00                | 2.18  | 97.82     |
| Rental and Leasing Services (NAICS 532)                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Waste Management and Remediation Services (NAICS 562)        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Publishing Industries (except Internet) (NAICS 511)          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Mining (except Oil and Gas) (NAICS 212)                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Printing and Related Support Activities (NAICS 323)          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Miscellaneous Manufacturing (NAICS 339)                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Ambulatory Health Care Services (NAICS 621)                  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |



## M/WBE Utilization and Disparity in ARC's Markets

| Industry Sub-Sector                                | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE       | Non-M/WBE    |
|--|------------------|-------------|-------------|-----------------|---------------------|-------------|--------------|
| Chemical Manufacturing (NAICS 325)                 | 0.00             | 0.00        | 0.00        | 0.00            | 25.88               | 25.88       | 74.12        |
| Fabricated Metal Product Manufacturing (NAICS 332) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Machinery Manufacturing (NAICS 333)                | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Telecommunications (NAICS 517)                     | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Paper Manufacturing (NAICS 322)                    | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Administrative and Support Services (NAICS 561)    | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Miscellaneous Store Retailers (NAICS 453)          | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Truck Transportation (NAICS 484)                   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Repair and Maintenance (NAICS 811)                 | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Transportation Equipment Manufacturing (NAICS 336) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Personal and Laundry Services (NAICS 812)          | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| <i>COMMODITIES</i>                                 | <i>1.51</i>      | <i>0.00</i> | <i>0.00</i> | <i>0.00</i>     | <i>0.37</i>         | <i>1.88</i> | <i>98.12</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.6. Construction—M/WBE Utilization by Industry Group (Percentages), 2003-2007**

| Industry Group  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Nonresidential Building Construction (NAICS 2362)   | 0.10             | 0.00     | 0.00  | 0.00            | 0.11                | 0.21  | 99.79     |
| Utility System Construction (NAICS 2371)  | 2.03             | 0.00     | 0.00  | 0.00            | 0.00                | 2.03  | 97.97     |
| Building Equipment Contractors (NAICS 2382)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.35                | 0.35  | 99.65     |
| Highway, Street, and Bridge Construction (NAICS 2373)                                       | 4.34             | 0.00     | 0.00  | 0.00            | 0.91                | 5.25  | 94.75     |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)                       | 20.44            | 0.00     | 12.12 | 0.00            | 8.36                | 40.93 | 59.07     |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 0.00             | 0.00     | 0.00  | 0.00            | 0.01                | 0.01  | 99.99     |
| Building Finishing Contractors (NAICS 2383)   | 1.17             | 13.17    | 0.00  | 11.17           | 1.94                | 27.46 | 72.54     |
| Architectural, Engineering, and Related Services (NAICS 5413)                               | 17.14            | 2.74     | 0.00  | 0.00            | 25.70               | 45.59 | 54.41     |
| Other Specialty Trade Contractors (NAICS 2389)  | 52.83            | 0.00     | 0.00  | 0.00            | 18.54               | 71.37 | 28.63     |
| Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)                      | 1.27             | 0.00     | 0.00  | 0.00            | 5.29                | 6.56  | 93.44     |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 0.42             | 0.00     | 0.00  | 0.00            | 0.00                | 0.42  | 99.58     |
| Commercial and Service Industry Machinery Manufacturing (NAICS 3333)                        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Remediation and Other Waste Management Services (NAICS 5629)                                | 2.49             | 2.48     | 1.90  | 0.00            | 31.63               | 38.51 | 61.49     |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)                      | 2.51             | 0.00     | 0.00  | 0.00            | 0.00                | 2.51  | 97.49     |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group   | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| General Freight Trucking (NAICS 4841)  | 53.59            | 0.00     | 0.00  | 0.00            | 18.70               | 72.29 | 27.71     |
| Other Heavy and Civil Engineering Construction (NAICS 2379)                          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Nonmetallic Mineral Mining and Quarrying (NAICS 2123)                                | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)            | 0.00             | 0.00     | 0.00  | 0.00            | 1.96                | 1.96  | 98.04     |
| Services to Buildings and Dwellings (NAICS 5617)                                     | 21.93            | 0.00     | 0.66  | 0.00            | 0.00                | 22.59 | 77.41     |
| Cement and Concrete Product Manufacturing (NAICS 3273)                               | 0.00             | 2.31     | 0.00  | 0.00            | 7.20                | 9.52  | 90.48     |
| Architectural and Structural Metals Manufacturing (NAICS 3323)                       | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Plastics Product Manufacturing (NAICS 3261)  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234) | 0.00             | 0.00     | 0.00  | 0.00            | 73.80               | 73.80 | 26.20     |
| Furniture Stores (NAICS 4421)  | 0.00             | 0.00     | 0.00  | 0.00            | 6.59                | 6.59  | 93.41     |
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)                        | 0.00             | 0.00     | 0.00  | 0.00            | 95.36               | 95.36 | 4.64      |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Chemical and Allied Products Merchant Wholesalers (NAICS 4246)                       | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Other Miscellaneous Store Retailers (NAICS 4539)                                     | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Other Wood Product Manufacturing (NAICS 3219)  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231) | 0.00             | 0.00     | 0.00  | 0.00            | 82.39               | 82.39 | 17.61     |
| Office Administrative Services (NAICS 5611)  | 96.99            | 0.00     | 0.00  | 0.00            | 0.00                | 96.99 | 3.01      |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Other Professional, Scientific, and Technical Services (NAICS 5419)                 | 0.00             | 0.00     | 0.00  | 0.00            | 9.99                | 9.99  | 90.01     |
| Commercial and Industrial Machinery and Equipment (except Auto) Repair (NAICS 8113) | 0.00             | 0.00     | 0.00  | 0.00            | 0.25                | 0.25  | 99.75     |
| Medical Equipment and Supplies Manufacturing (NAICS 3391)                           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Paper and Paper Product Merchant Wholesalers (NAICS 4241)                           | 0.00             | 0.00     | 0.00  | 0.00            | 99.37               | 99.37 | 0.63      |
| Investigation and Security Services (NAICS 5616)                                    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Wired Telecommunications Carriers (NAICS 5171)                                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Lawn and Garden Equipment and Supplies Stores (NAICS 4442)                          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)                  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Fabric Mills (NAICS 3132)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Other General Purpose Machinery Manufacturing (NAICS 3339)                          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Clay Product and Refractory Manufacturing (NAICS 3271)                              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Employment Services (NAICS 5613)  | 0.00             | 0.00     | 0.00  | 0.00            | 60.91               | 60.91 | 39.09     |
| Land Subdivision (NAICS 2372)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Aerospace Product and Parts Manufacturing (NAICS 3364)                              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Direct Selling Establishments (NAICS 4543)  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group  | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE       | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|-------------|--------------|
| Other Chemical Product and Preparation Manufacturing (NAICS 3259) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Couriers and Express Delivery Services (NAICS 4921)               | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Electric Lighting Equipment Manufacturing (NAICS 3351)            | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Other Textile Product Mills (NAICS 3149)                          | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Office Supplies, Stationery, and Gift Stores (NAICS 4352)         | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Business Support Services (NAICS 5614)                            | 100.00           | 0.00        | 0.00        | 0.00            | 0.00                | 100.00      | 0.00         |
| Limited-Service Eating Places (NAICS 7222)                        | 0.00             | 0.00        | 0.00        | 0.00            | 100.00              | 100.00      | 0.00         |
| Jewelry, Luggage, and Leather Goods Stores (NAICS 4483)           | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Activities Related to Real Estate (NAICS 5313)                    | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Florists (NAICS 4531)   | 0.00             | 0.00        | 0.00        | 0.00            | 100.00              | 100.00      | 0.00         |
| Drycleaning and Laundry Services (NAICS 8123)                     | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Office Furniture (including Fixtures) Manufacturing (NAICS 3372)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| <i>CONSTRUCTION</i>   | <i>3.04</i>      | <i>0.34</i> | <i>0.41</i> | <i>0.21</i>     | <i>1.90</i>         | <i>5.91</i> | <i>94.09</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.7. CRS—M/WBE Utilization by Industry Group (Percentages), 2003-2007**

| Industry Group  | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE        | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|--------------|--------------|
| Architectural, Engineering, and Related Services (NAICS 5413)                               | 21.22            | 7.70        | 0.00        | 0.00            | 0.68                | 29.60        | 70.40        |
| Building Equipment Contractors (NAICS 2382)   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Remediation and Other Waste Management Services (NAICS 5629)                                | 0.00             | 0.00        | 0.00        | 100.00          | 0.00                | 100.00       | 0.00         |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)                   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Investigation and Security Services (NAICS 5616)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Scientific Research and Development Services (NAICS 5417)                                   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)                      | 8.76             | 0.00        | 0.00        | 0.00            | 17.52               | 26.28        | 73.72        |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Services to Buildings and Dwellings (NAICS 5617)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| Limited-Service Eating Places (NAICS 7222)  | 0.00             | 0.00        | 0.00        | 0.00            | 100.00              | 100.00       | 0.00         |
| Business Support Services (NAICS 5614)  | 95.16            | 0.00        | 0.00        | 0.00            | 0.00                | 95.16        | 4.84         |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00         | 100.00       |
| <i>CRS</i>  | <i>18.99</i>     | <i>6.87</i> | <i>0.00</i> | <i>2.08</i>     | <i>0.71</i>         | <i>28.65</i> | <i>71.35</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.8. Services—M/WBE Utilization by Industry Group (Percentages), 2003-2007**

| Industry Group   | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|--|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Architectural, Engineering, and Related Services (NAICS 5413)                        | 1.18             | 1.27     | 0.00  | 0.00            | 0.31                | 2.76  | 97.24     |
| Legal Services (NAICS 5411)  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Software Publishers (NAICS 5112)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4237) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Building Equipment Contractors (NAICS 2382)  | 3.93             | 0.00     | 0.00  | 0.00            | 0.00                | 3.93  | 96.07     |
| Computer Systems Design and Related Services (NAICS 5415)                            | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)               | 27.13            | 4.56     | 0.00  | 0.00            | 0.00                | 31.69 | 68.31     |
| Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Audio and Video Equipment Manufacturing (NAICS 3343)                                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Nonresidential Building Construction (NAICS 2362)                                    | 99.95            | 0.00     | 0.00  | 0.00            | 0.00                | 99.95 | 0.05      |
| Business Support Services (NAICS 5614)   | 0.00             | 0.00     | 0.00  | 0.00            | 74.46               | 74.46 | 25.54     |
| Remediation and Other Waste Management Services (NAICS 5629)                         | 0.00             | 0.00     | 0.00  | 93.26           | 0.00                | 93.26 | 6.74      |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Advertising, Public Relations, and Related Services (NAICS 5418)                     | 67.17            | 0.00     | 0.00  | 0.00            | 5.30                | 72.48 | 27.52     |
| Wired Telecommunications Carriers (NAICS 5171)                                       | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group  | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE       | Non-M/WBE    |
|---|------------------|-------------|-------------|-----------------|---------------------|-------------|--------------|
| Data Processing, Hosting, and Related Services (NAICS 5182)                                 | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Utility System Construction (NAICS 2371)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Electronics and Appliance Stores (NAICS 4431)   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Investigation and Security Services (NAICS 5616)  | 0.00             | 0.00        | 0.00        | 0.00            | 55.62               | 55.62       | 44.38        |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)                       | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Services to Buildings and Dwellings (NAICS 5617)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Computer and Peripheral Equipment Manufacturing (NAICS 3341)                                | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Scientific Research and Development Services (NAICS 5417)                                   | 65.25            | 0.00        | 0.00        | 0.00            | 34.75               | 100.00      | 0.00         |
| Other Textile Product Mills (NAICS 3149)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Other Specialty Trade Contractors (NAICS 2389)  | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Building Finishing Contractors (NAICS 2383)   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)                               | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| General Freight Trucking (NAICS 4841)   | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345) | 0.00             | 0.00        | 0.00        | 0.00            | 0.00                | 0.00        | 100.00       |
| <i>SERVICES</i>   | <i>4.15</i>      | <i>0.66</i> | <i>0.00</i> | <i>1.14</i>     | <i>1.52</i>         | <i>7.47</i> | <i>92.53</i> |

Source: See Table 7.1.



# M/WBE Utilization and Disparity in ARC's Markets

**Table 7.9. Commodities—M/WBE Utilization by Industry Group (Percentages), 2003-2007**

| Industry Group  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)                          | 2.18             | 0.00     | 0.00  | 0.00            | 0.00                | 2.18  | 97.82     |
| Automobile Dealers (NAICS 4411)   | 4.92             | 0.00     | 0.00  | 0.00            | 0.00                | 4.92  | 95.08     |
| Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)                        | 1.45             | 0.00     | 0.00  | 0.00            | 0.00                | 1.45  | 98.55     |
| Highway, Street, and Bridge Construction (NAICS 2373)                                       | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Communications Equipment Manufacturing (NAICS 3342)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)        | 0.00             | 0.00     | 0.00  | 0.00            | 1.40                | 1.40  | 98.60     |
| Electronics and Appliance Stores (NAICS 4431)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)                           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Computer Systems Design and Related Services (NAICS 5415)                                   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)                         | 0.00             | 0.00     | 0.00  | 0.00            | 8.14                | 8.14  | 91.86     |
| Grocery and Related Product Merchant Wholesalers (NAICS 4244)                               | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4)           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Chemical and Allied Products Merchant Wholesalers (NAICS 4246)                              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)           | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE  | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|--------|-----------|
| Other Motor Vehicle Dealers (NAICS 4412)                                  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Building Equipment Contractors (NAICS 2382)                               | 3.78             | 0.00     | 0.00  | 0.00            | 0.00                | 3.78   | 96.22     |
| Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)             | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Remediation and Other Waste Management Services (NAICS 5629)              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Foundation, Structure, and Building Exterior Contractors (NAICS 2381)     | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)         | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Software Publishers (NAICS 5112)  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Nonmetallic Mineral Mining and Quarrying (NAICS 2123)                     | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Printing and Related Support Activities (NAICS 3231)                      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Other Ambulatory Health Care Services (NAICS 6219)                        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Resin, Synthetic Rubber, and Artificial Synthetic Fibers Mfg (NAICS 3252) | 0.00             | 0.00     | 0.00  | 0.00            | 100.00              | 100.00 | 0.00      |
| Other Miscellaneous Manufacturing (NAICS 3399)                            | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Other Fabricated Metal Product Manufacturing (NAICS 3329)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |
| Utility System Construction (NAICS 2371)                                  | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00   | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group  | African-American | Hispanic | Asian | Native American | Non-minority female | M/WBE | Non-M/WBE |
|---|------------------|----------|-------|-----------------|---------------------|-------|-----------|
| Architectural, Engineering, and Related Services (NAICS 5413)             | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Medical Equipment and Supplies Manufacturing (NAICS 3391)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Computer and Peripheral Equipment Manufacturing (NAICS 3341)              | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Commercial and Service Industry Machinery Manufacturing (NAICS 3333)      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Converted Paper Product Manufacturing (NAICS 3222)                        | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Management, Scientific, and Technical Consulting Services (NAICS 5416)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Services to Buildings and Dwellings (NAICS 5617)                          | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233) | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Office Supplies, Stationery, and Gift Stores (NAICS 4532)                 | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)      | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)   | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| General Freight Trucking (NAICS 4841)                                     | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Wired Telecommunications Carriers (NAICS 5171)                            | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Aerospace Product and Parts Manufacturing (NAICS 3364)                    | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Building Finishing Contractors (NAICS 2383)                               | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |
| Drycleaning and Laundry Services (NAICS 8123)                             | 0.00             | 0.00     | 0.00  | 0.00            | 0.00                | 0.00  | 100.00    |

## M/WBE Utilization and Disparity in ARC's Markets

| Industry Group     | African-American | Hispanic    | Asian       | Native American | Non-minority female | M/WBE       | Non-M/WBE    |
|--------------------|------------------|-------------|-------------|-----------------|---------------------|-------------|--------------|
| <i>COMMODITIES</i> | <i>1.51</i>      | <i>0.00</i> | <i>0.00</i> | <i>0.00</i>     | <i>0.37</i>         | <i>1.88</i> | <i>98.12</i> |

Source: See Table 7.1.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.10. Disparity Results for ARC Contracting, Overall and By Procurement Category, 2003-2007**

| Procurement Category / M/WBE Type | Utilization | Availability | Disparity Ratio |    |
|-----------------------------------|-------------|--------------|-----------------|----|
| All Procurement                   |             |              |                 |    |
| African-American                  | 3.94        | 14.26        | 27.64           | *  |
| Hispanic                          | 0.74        | 2.52         | 29.47           |    |
| Asian                             | 0.30        | 1.87         | 15.99           |    |
| Native                            | 0.37        | 0.58         | 62.77           |    |
| Minority-owned                    | 5.35        | 19.23        | 27.82           | ** |
| Non-minority female               | 1.57        | 15.41        | 10.18           | ** |
| M/WBE total                       | 6.92        | 34.64        | 19.97           | ** |
| Construction                      |             |              |                 |    |
| African-American                  | 3.04        | 15.22        | 19.98           |    |
| Hispanic                          | 0.34        | 2.70         | 12.60           |    |
| Asian                             | 0.41        | 0.63         | 66.00           |    |
| Native                            | 0.21        | 0.58         | 36.78           |    |
| Minority-owned                    | 4.01        | 19.13        | 20.96           | *  |
| Non-minority female               | 1.90        | 13.24        | 14.34           |    |
| M/WBE total                       | 5.91        | 32.37        | 18.25           | ** |
| CRS                               |             |              |                 |    |
| African-American                  | 18.99       | 13.36        | .               |    |
| Hispanic                          | 6.87        | 2.78         | .               |    |
| Asian                             | 0.00        | 5.84         | 0.07            |    |
| Native                            | 2.08        | 0.62         | .               |    |
| Minority-owned                    | 27.94       | 22.60        | .               |    |
| Non-minority female               | 0.71        | 22.33        | 3.18            | *  |
| M/WBE total                       | 28.65       | 44.93        | 63.77           |    |
| Services                          |             |              |                 |    |
| African-American                  | 4.15        | 13.11        | 31.66           |    |
| Hispanic                          | 0.66        | 2.01         | 33.00           |    |
| Asian                             | 0.00        | 4.45         | 0.00            |    |
| Native                            | 1.14        | 0.71         | .               |    |
| Minority-owned                    | 5.95        | 20.28        | 29.33           |    |
| Non-minority female               | 1.52        | 19.82        | 7.67            | *  |
| M/WBE total                       | 7.47        | 40.11        | 18.63           | ** |
| Commodities                       |             |              |                 |    |
| African-American                  | 1.51        | 6.52         | 23.17           | ** |
| Hispanic                          | 0.00        | 0.76         | 0.00            |    |
| Asian                             | 0.00        | 3.84         | 0.00            | ** |
| Native                            | 0.00        | 0.29         | 0.00            |    |
| Minority-owned                    | 1.51        | 11.41        | 13.25           | ** |
| Non-minority female               | 0.37        | 19.13        | 1.92            | ** |
| M/WBE total                       | 1.88        | 30.54        | 6.15            | ** |

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe. Notes: (1) "\*" indicates an adverse disparity that is statistically significant at the 10% level or better (90% confidence). "\*\*\*" indicates the disparity is significant at a 5% level or better (95% confidence). "\*\*\*\*" indicates significance at a 1% level or better (99% confidence). An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.11. Industry Sub-Sector Disparity Results for ARC Construction Contracting**

| Procurement Category / DBE Type                      | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Construction of Buildings (NAICS 236)                |             |              |                 |
| African-American                                     | 0.10        | 20.32        | 0.48            |
| Hispanic   | 0.00        | 3.99         | 0.00            |
| Asian  | 0.00        | 0.05         | 0.00            |
| Native   | 0.00        | 0.45         | 0.00            |
| Minority-owned                                       | 0.10        | 24.81        | 0.40            |
| Non-minority female                                  | 0.11        | 11.55        | 0.93            |
| M/WBE total  | 0.21        | 36.37        | 0.57            |
| Heavy and Civil Engineering Construction (NAICS 237) |             |              |                 |
| African-American                                     | 2.38        | 6.21         | 38.32           |
| Hispanic   | 0.00        | 0.38         | 0.00            |
| Asian  | 0.00        | 0.03         | 0.00            |
| Native   | 0.00        | 0.43         | 0.00            |
| Minority-owned                                       | 2.38        | 7.06         | 33.74           |
| Non-minority female                                  | 0.15        | 18.75        | 0.78 *          |
| M/WBE total  | 2.53        | 25.81        | 9.79 **         |
| Specialty Trade Contractors (NAICS 238)              |             |              |                 |
| African-American                                     | 11.40       | 10.73        | .               |
| Hispanic   | 1.80        | 1.56         | .               |
| Asian  | 2.85        | 1.06         | .               |
| Native   | 1.53        | 1.08         | .               |
| Minority-owned                                       | 17.58       | 14.44        | .               |
| Non-minority female                                  | 4.67        | 10.62        | 43.96           |
| M/WBE total  | 22.25       | 25.06        | 88.78           |
| Merchant Wholesalers, Durable Goods (NAICS 423)      |             |              |                 |
| African-American                                     | 0.36        | 1.39         | 26.20           |
| Hispanic   | 0.00        | 0.56         | 0.00            |
| Asian  | 0.00        | 2.17         | 0.00            |
| Native   | 0.00        | 0.16         | 0.00            |
| Minority-owned                                       | 0.36        | 4.28         | 8.49            |
| Non-minority female                                  | 4.99        | 21.19        | 23.54           |
| M/WBE total  | 5.35        | 25.47        | 21.01           |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                              | Utilization | Availability | Disparity Index |    |
|--|-------------|--------------|-----------------|----|
| Professional, Scientific, and Technical Services (NAICS 541) |             |              |                 |    |
| African-American   | 9.69        | 19.14        | 50.64           |    |
| Hispanic   | 1.49        | 2.20         | 67.74           |    |
| Asian  | 0.00        | 5.52         | 0.00            |    |
| Native   | 0.00        | 0.59         | 0.00            |    |
| Minority-owned   | 11.18       | 27.45        | 40.73           |    |
| Non-minority female  | 14.01       | 23.13        | 60.60           |    |
| M/WBE total  | 25.19       | 50.58        | 49.81           |    |
| Machinery Manufacturing (NAICS 333)                          |             |              |                 |    |
| African-American   | 0.00        | 29.86        | 0.00            |    |
| Hispanic   | 0.00        | 33.18        | 0.00            |    |
| Asian  | 0.00        | 1.13         | 0.00            |    |
| Native   | 0.00        | 0.00         | .               |    |
| Minority-owned   | 0.00        | 64.16        | 0.00            | ** |
| Non-minority female  | 0.00        | 8.42         | 0.00            |    |
| M/WBE total  | 0.00        | 72.58        | 0.00            | ** |
| Waste Management and Remediation Services (NAICS 562)        |             |              |                 |    |
| African-American   | 2.49        | 15.19        | 16.41           |    |
| Hispanic   | 2.48        | 0.25         | .               |    |
| Asian  | 1.90        | 0.69         | .               |    |
| Native   | 0.00        | 0.79         | 0.00            |    |
| Minority-owned   | 6.88        | 16.92        | 40.65           |    |
| Non-minority female  | 31.63       | 24.19        | .               |    |
| M/WBE total  | 38.51       | 41.11        | 93.67           |    |
| Truck Transportation (NAICS 484)                             |             |              |                 |    |
| African-American   | 53.59       | 17.95        | .               |    |
| Hispanic   | 0.00        | 0.60         | 0.00            |    |
| Asian  | 0.00        | 1.24         | 0.00            |    |
| Native   | 0.00        | 0.68         | 0.00            |    |
| Minority-owned   | 53.59       | 20.47        | .               |    |
| Non-minority female  | 18.70       | 16.13        | .               |    |
| M/WBE total  | 72.29       | 36.60        | .               |    |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                       | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Administrative and Support Services (NAICS 561)       |             |              |                 |
| African-American                                      | 27.42       | 14.36        | .               |
| Hispanic  | 0.00        | 0.44         | 0.00            |
| Asian   | 0.52        | 1.62         | 32.36           |
| Native  | 0.00        | 0.87         | 0.00            |
| Minority-owned  | 27.94       | 17.29        | .               |
| Non-minority female                                   | 1.61        | 15.90        | 10.12           |
| M/WBE total   | 29.55       | 33.19        | 89.04           |
| Mining (except Oil and Gas) (NAICS 212)               |             |              |                 |
| African-American                                      | 0.00        | 1.26         | 0.00            |
| Hispanic  | 0.00        | 0.63         | 0.00            |
| Asian   | 0.00        | 2.52         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 4.40         | 0.00            |
| Non-minority female                                   | 0.00        | 14.47        | 0.00            |
| M/WBE total   | 0.00        | 18.87        | 0.00            |
| Nonmetallic Mineral Product Manufacturing (NAICS 327) |             |              |                 |
| African-American                                      | 0.00        | 5.90         | 0.00            |
| Hispanic  | 2.28        | 0.53         | .               |
| Asian   | 0.00        | 2.11         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 2.28        | 8.53         | 26.76           |
| Non-minority female                                   | 7.11        | 12.69        | 56.03           |
| M/WBE total   | 9.39        | 21.22        | 44.26           |
| Fabricated Metal Product Manufacturing (NAICS 332)    |             |              |                 |
| African-American                                      | 0.00        | 1.01         | 0.00            |
| Hispanic  | 0.00        | 0.44         | 0.00            |
| Asian   | 0.00        | 2.16         | 0.00            |
| Native  | 0.00        | 0.39         | 0.00            |
| Minority-owned  | 0.00        | 4.00         | 0.00            |
| Non-minority female                                   | 0.00        | 31.03        | 0.00            |
| M/WBE total   | 0.00        | 35.03        | 0.00            |



## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                        | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Plastics and Rubber Products Manufacturing (NAICS 326) |             |              |                 |
| African-American                                       | 0.00        | 7.41         | 0.00            |
| Hispanic   | 0.00        | 0.36         | 0.00            |
| Asian  | 0.00        | 2.37         | 0.00            |
| Native   | 0.00        | 0.93         | 0.00            |
| Minority-owned   | 0.00        | 11.07        | 0.00            |
| Non-minority female                                    | 0.00        | 30.15        | 0.00            |
| M/WBE total  | 0.00        | 41.22        | 0.00            |
| Merchant Wholesalers, Nondurable Goods (NAICS 424)     |             |              |                 |
| African-American                                       | 0.00        | 2.65         | 0.00            |
| Hispanic   | 0.00        | 0.58         | 0.00            |
| Asian  | 0.00        | 2.42         | 0.00            |
| Native   | 0.00        | 0.09         | 0.00            |
| Minority-owned   | 0.00        | 5.74         | 0.00            |
| Non-minority female                                    | 23.47       | 15.79        | .               |
| M/WBE total  | 23.47       | 21.53        | .               |
| Furniture and Home Furnishings Stores (NAICS 442)      |             |              |                 |
| African-American                                       | 0.00        | 2.98         | 0.00            |
| Hispanic   | 0.00        | 0.39         | 0.00            |
| Asian  | 0.00        | 2.07         | 0.00            |
| Native   | 0.00        | 1.25         | 0.00            |
| Minority-owned   | 0.00        | 6.69         | 0.00            |
| Non-minority female                                    | 6.59        | 51.72        | 12.73           |
| M/WBE total  | 6.59        | 58.41        | 11.28           |
| Rental and Leasing Services (NAICS 532)                |             |              |                 |
| African-American                                       | 0.00        | 8.70         | 0.00            |
| Hispanic   | 0.00        | 0.12         | 0.00            |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.80         | 0.00            |
| Minority-owned   | 0.00        | 11.09        | 0.00            |
| Non-minority female                                    | 0.00        | 15.69        | 0.00            |
| M/WBE total  | 0.00        | 26.78        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type           | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Miscellaneous Store Retailers (NAICS 453) |             |              |                 |
| African-American                          | 0.00        | 5.28         | 0.00            |
| Hispanic                                  | 0.00        | 0.33         | 0.00            |
| Asian                                     | 0.00        | 1.63         | 0.00            |
| Native                                    | 0.00        | 0.88         | 0.00            |
| Minority-owned                            | 0.00        | 8.13         | 0.00            |
| Non-minority female                       | 0.13        | 36.01        | 0.35            |
| M/WBE total                               | 0.13        | 44.14        | 0.29            |
| Wood Product Manufacturing (NAICS 321)    |             |              |                 |
| African-American                          | 0.00        | 45.27        | 0.00            |
| Hispanic                                  | 0.00        | 0.31         | 0.00            |
| Asian                                     | 0.00        | 1.26         | 0.00            |
| Native                                    | 0.00        | 0.00         | .               |
| Minority-owned                            | 0.00        | 46.84        | 0.00            |
| Non-minority female                       | 0.00        | 12.59        | 0.00            |
| M/WBE total                               | 0.00        | 59.43        | 0.00            |
| Repair and Maintenance (NAICS 811)        |             |              |                 |
| African-American                          | 0.00        | 10.00        | 0.00            |
| Hispanic                                  | 0.00        | 0.18         | 0.00            |
| Asian                                     | 0.00        | 1.43         | 0.00            |
| Native                                    | 0.00        | 0.67         | 0.00            |
| Minority-owned                            | 0.00        | 12.29        | 0.00            |
| Non-minority female                       | 0.25        | 18.25        | 1.39            |
| M/WBE total                               | 0.25        | 30.53        | 0.83            |
| Miscellaneous Manufacturing (NAICS 339)   |             |              |                 |
| African-American                          | 0.00        | 0.59         | 0.00            |
| Hispanic                                  | 0.00        | 0.16         | 0.00            |
| Asian                                     | 0.00        | 1.44         | 0.00            |
| Native                                    | 0.00        | 0.82         | 0.00            |
| Minority-owned                            | 0.00        | 3.00         | 0.00            |
| Non-minority female                       | 0.00        | 47.09        | 0.00            |
| M/WBE total                               | 0.00        | 50.10        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type   | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Telecommunications (NAICS 517)  |             |              |                 |
| African-American  | 0.00        | 26.65        | 0.00            |
| Hispanic  | 0.00        | 0.21         | 0.00            |
| Asian   | 0.00        | 3.86         | 0.00            |
| Native  | 0.00        | 0.60         | 0.00            |
| Minority-owned  | 0.00        | 31.32        | 0.00            |
| Non-minority female   | 0.00        | 23.65        | 0.00            |
| M/WBE total   | 0.00        | 54.97        | 0.00 *          |
| Building Material and Garden Equipment and Supplies Dealers (NAICS 444) |             |              |                 |
| African-American  | 0.00        | 0.63         | 0.00            |
| Hispanic  | 0.00        | 0.31         | 0.00            |
| Asian   | 0.00        | 1.26         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 2.20         | 0.00            |
| Non-minority female   | 0.00        | 32.23        | 0.00            |
| M/WBE total   | 0.00        | 34.43        | 0.00            |
| Furniture and Related Product Manufacturing (NAICS 337)                 |             |              |                 |
| African-American  | 0.00        | 0.63         | 0.00            |
| Hispanic  | 0.00        | 0.31         | 0.00            |
| Asian   | 0.00        | 1.26         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 2.20         | 0.00            |
| Non-minority female   | 0.00        | 57.23        | 0.00            |
| M/WBE total   | 0.00        | 59.43        | 0.00            |
| Textile Mills (NAICS 313)   |             |              |                 |
| African-American  | 0.00        | 1.10         | 0.00            |
| Hispanic  | 0.00        | 0.55         | 0.00            |
| Asian   | 0.00        | 2.20         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 3.85         | 0.00            |
| Non-minority female   | 0.00        | 12.66        | 0.00            |
| M/WBE total   | 0.00        | 16.51        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                       | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Insurance Carriers and Related Activities (NAICS 524) |             |              |                 |
| African-American                                      | 0.00        | 9.57         | 0.00            |
| Hispanic  | 0.00        | 0.46         | 0.00            |
| Asian   | 0.00        | 1.29         | 0.00            |
| Native  | 0.00        | 1.01         | 0.00            |
| Minority-owned  | 0.00        | 12.33        | 0.00            |
| Non-minority female                                   | 0.00        | 15.13        | 0.00            |
| M/WBE total   | 0.00        | 27.46        | 0.00            |
| Transportation Equipment Manufacturing (NAICS 336)    |             |              |                 |
| African-American                                      | 0.00        | 1.26         | 0.00            |
| Hispanic  | 0.00        | 0.63         | 0.00            |
| Asian   | 0.00        | 2.52         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 4.40         | 0.00            |
| Non-minority female                                   | 0.00        | 14.47        | 0.00            |
| M/WBE total   | 0.00        | 18.87        | 0.00            |
| Nonstore Retailers (NAICS 454)                        |             |              |                 |
| African-American                                      | 0.00        | 1.12         | 0.00            |
| Hispanic  | 0.00        | 0.56         | 0.00            |
| Asian   | 0.00        | 2.24         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 3.91         | 0.00            |
| Non-minority female                                   | 0.00        | 12.86        | 0.00            |
| M/WBE total   | 0.00        | 16.77        | 0.00            |
| Chemical Manufacturing (NAICS 325)                    |             |              |                 |
| African-American                                      | 0.00        | 0.69         | 0.00            |
| Hispanic  | 0.00        | 40.13        | 0.00            |
| Asian   | 0.00        | 1.81         | 0.00            |
| Native  | 0.00        | 1.30         | 0.00            |
| Minority-owned  | 0.00        | 43.92        | 0.00            |
| Non-minority female                                   | 0.00        | 32.46        | 0.00            |
| M/WBE total   | 0.00        | 76.38        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type  | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Couriers and Messengers (NAICS 492)                                      |             |              |                 |
| African-American   | 0.00        | 8.82         | 0.00            |
| Hispanic   | 0.00        | 0.00         | .               |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.74         | 0.00            |
| Minority-owned   | 0.00        | 11.03        | 0.00            |
| Non-minority female  | 0.00        | 10.29        | 0.00            |
| M/WBE total  | 0.00        | 21.32        | 0.00            |
| Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335) |             |              |                 |
| African-American   | 0.00        | 0.00         | .               |
| Hispanic   | 0.00        | 0.00         | .               |
| Asian  | 0.00        | 0.00         | .               |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned   | 0.00        | 0.00         | .               |
| Non-minority female  | 0.00        | 0.00         | .               |
| M/WBE total  | 0.00        | 0.00         | .               |
| Textile Product Mills (NAICS 314)  |             |              |                 |
| African-American   | 0.00        | 0.95         | 0.00            |
| Hispanic   | 0.00        | 0.44         | 0.00            |
| Asian  | 0.00        | 1.98         | 0.00            |
| Native   | 0.00        | 0.23         | 0.00            |
| Minority-owned   | 0.00        | 3.60         | 0.00            |
| Non-minority female  | 0.00        | 36.18        | 0.00            |
| M/WBE total  | 0.00        | 39.78        | 0.00            |
| Food Services and Drinking Places (NAICS 722)                            |             |              |                 |
| African-American   | 0.00        | 20.12        | 0.00            |
| Hispanic   | 0.00        | 0.25         | 0.00            |
| Asian  | 0.00        | 1.30         | 0.00            |
| Native   | 0.00        | 20.15        | 0.00            |
| Minority-owned   | 0.00        | 41.82        | 0.00            |
| Non-minority female  | 100.00      | 9.99         | .               |
| M/WBE total  | 100.00      | 51.81        | .               |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                      | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Clothing and Clothing Accessories Stores (NAICS 448) |             |              |                 |
| African-American                                     | 0.00        | 2.52         | 0.00            |
| Hispanic   | 0.00        | 0.52         | 0.00            |
| Asian  | 0.00        | 2.34         | 0.00            |
| Native   | 0.00        | 0.12         | 0.00            |
| Minority-owned                                       | 0.00        | 5.51         | 0.00            |
| Non-minority female                                  | 0.00        | 13.77        | 0.00            |
| M/WBE total  | 0.00        | 19.28        | 0.00            |
| Real Estate (NAICS 531)                              |             |              |                 |
| African-American                                     | 0.00        | 13.55        | 0.00            |
| Hispanic   | 0.00        | 0.21         | 0.00            |
| Asian  | 0.00        | 1.29         | 0.00            |
| Native   | 0.00        | 0.75         | 0.00            |
| Minority-owned                                       | 0.00        | 15.80        | 0.00            |
| Non-minority female                                  | 0.00        | 24.45        | 0.00            |
| M/WBE total  | 0.00        | 40.25        | 0.00            |
| Personal and Laundry Services (NAICS 812)            |             |              |                 |
| African-American                                     | 0.00        | 8.82         | 0.00            |
| Hispanic   | 0.00        | 0.00         | .               |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.74         | 0.00            |
| Minority-owned                                       | 0.00        | 11.03        | 0.00            |
| Non-minority female                                  | 0.00        | 10.29        | 0.00            |
| M/WBE total  | 0.00        | 21.32        | 0.00            |

Source and Notes: See Table 7.10.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.12. Industry Sub-Sector Disparity Results for ARC CRS Contracting**

| Procurement Category / DBE Type                              | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Professional, Scientific, and Technical Services (NAICS 541) |             |              |                 |
| African-American   | 20.97       | 16.11        | .               |
| Hispanic   | 7.60        | 2.46         | .               |
| Asian  | 0.00        | 7.17         | 0.07            |
| Native   | 0.00        | 0.50         | 0.00            |
| Minority-owned   | 28.57       | 26.24        | .               |
| Non-minority female  | 0.71        | 25.60        | 2.77 *          |
| M/WBE total  | 29.28       | 51.84        | 56.49           |
| Specialty Trade Contractors (NAICS 238)                      |             |              |                 |
| African-American   | 0.00        | 9.05         | 0.00            |
| Hispanic   | 0.00        | 1.76         | 0.00            |
| Asian  | 0.00        | 0.00         | .               |
| Native   | 0.00        | 0.98         | 0.00            |
| Minority-owned   | 0.00        | 11.79        | 0.00            |
| Non-minority female  | 0.00        | 7.99         | 0.00            |
| M/WBE total  | 0.00        | 19.79        | 0.00            |
| Waste Management and Remediation Services (NAICS 562)        |             |              |                 |
| African-American   | 0.00        | 8.21         | 0.00            |
| Hispanic   | 0.00        | 0.25         | 0.00            |
| Asian  | 0.00        | 1.41         | 0.00            |
| Native   | 100.00      | 0.83         | .               |
| Minority-owned   | 100.00      | 10.69        | .               |
| Non-minority female  | 0.00        | 24.82        | 0.00            |
| M/WBE total  | 100.00      | 35.51        | .               |
| Administrative and Support Services (NAICS 561)              |             |              |                 |
| African-American   | 8.60        | 6.43         | .               |
| Hispanic   | 0.00        | 0.63         | 0.00            |
| Asian  | 0.00        | 1.60         | 0.00            |
| Native   | 0.00        | 1.62         | 0.00            |
| Minority-owned   | 8.60        | 10.28        | 83.64           |
| Non-minority female  | 0.00        | 34.62        | 0.00            |
| M/WBE total  | 8.60        | 44.91        | 19.15           |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                       | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Insurance Carriers and Related Activities (NAICS 524) |             |              |                 |
| African-American                                      | 0.00        | 9.57         | 0.00            |
| Hispanic  | 0.00        | 0.46         | 0.00            |
| Asian   | 0.00        | 1.29         | 0.00            |
| Native  | 0.00        | 1.01         | 0.00            |
| Minority-owned  | 0.00        | 12.33        | 0.00            |
| Non-minority female                                   | 0.00        | 15.13        | 0.00            |
| M/WBE total   | 0.00        | 27.46        | 0.00            |
| Merchant Wholesalers, Durable Goods (NAICS 423)       |             |              |                 |
| African-American                                      | 0.00        | 1.09         | 0.00            |
| Hispanic  | 0.00        | 0.55         | 0.00            |
| Asian   | 0.00        | 2.18         | 0.00            |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned  | 0.00        | 3.82         | 0.00            |
| Non-minority female                                   | 0.00        | 19.20        | 0.00            |
| M/WBE total   | 0.00        | 23.02        | 0.00            |
| Food Services and Drinking Places (NAICS 722)         |             |              |                 |
| African-American                                      | 0.00        | 20.12        | 0.00            |
| Hispanic  | 0.00        | 0.25         | 0.00            |
| Asian   | 0.00        | 1.30         | 0.00            |
| Native  | 0.00        | 20.15        | 0.00            |
| Minority-owned  | 0.00        | 41.82        | 0.00            |
| Non-minority female                                   | 100.00      | 9.99         | .               |
|   | 100.00      | 51.81        | .               |

Source and Notes: See Table 7.10.



## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.13. Industry Sub-Sector Disparity Results for ARC Services Contracting**

| Procurement Category / DBE Type                              | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Professional, Scientific, and Technical Services (NAICS 541) |             |              |                 |
| African-American   | 3.50        | 15.12        | 23.12           |
| Hispanic   | 1.10        | 2.24         | 49.31           |
| Asian  | 0.00        | 5.58         | 0.00            |
| Native   | 0.00        | 0.60         | 0.00            |
| Minority-owned   | 4.60        | 23.54        | 19.54           |
| Non-minority female  | 0.35        | 22.10        | 1.59            |
| M/WBE total  | 4.95        | 45.64        | 10.85 *         |
| Merchant Wholesalers, Durable Goods (NAICS 423)              |             |              |                 |
| African-American   | 0.00        | 4.74         | 0.00            |
| Hispanic   | 0.00        | 0.50         | 0.00            |
| Asian  | 0.00        | 1.98         | 0.00            |
| Native   | 0.00        | 0.00         | 0.00            |
| Minority-owned   | 0.00        | 7.22         | 0.00            |
| Non-minority female  | 0.00        | 12.70        | 0.00            |
| M/WBE total  | 0.00        | 19.92        | 0.00            |
| Publishing Industries (except Internet) (NAICS 511)          |             |              |                 |
| African-American   | 0.00        | 37.14        | 0.00 **         |
| Hispanic   | 0.00        | 3.72         | 0.00            |
| Asian  | 0.00        | 13.91        | 0.00            |
| Native   | 0.00        | 5.17         | 0.00            |
| Minority-owned   | 0.00        | 59.93        | 0.00 **         |
| Non-minority female  | 0.00        | 15.91        | 0.00 *          |
| M/WBE total  | 0.00        | 75.85        | 0.00 **         |
| Specialty Trade Contractors (NAICS 238)                      |             |              |                 |
| African-American   | 3.53        | 9.74         | 36.26           |
| Hispanic   | 0.00        | 1.64         | 0.00            |
| Asian  | 0.00        | 0.66         | 0.00            |
| Native   | 0.00        | 1.09         | 0.00            |
| Minority-owned   | 3.53        | 13.13        | 26.91           |
| Non-minority female  | 0.00        | 9.82         | 0.00            |
| M/WBE total  | 3.53        | 22.95        | 15.39 *         |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                           | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Machinery Manufacturing (NAICS 333)                       |             |              |                 |
| African-American  | 0.00        | 0.97         | 0.00            |
| Hispanic  | 0.00        | 0.38         | 0.00            |
| Asian   | 0.00        | 2.16         | 0.00            |
| Native  | 0.00        | 0.65         | 0.00            |
| Minority-owned  | 0.00        | 4.16         | 0.00            |
| Non-minority female                                       | 0.00        | 23.46        | 0.00            |
| M/WBE total   | 0.00        | 27.63        | 0.00            |
| Rental and Leasing Services (NAICS 532)                   |             |              |                 |
| African-American  | 0.00        | 8.70         | 0.00            |
| Hispanic  | 0.00        | 0.12         | 0.00            |
| Asian   | 0.00        | 1.47         | 0.00            |
| Native  | 0.00        | 0.80         | 0.00            |
| Minority-owned  | 0.00        | 11.09        | 0.00            |
| Non-minority female                                       | 0.00        | 15.69        | 0.00            |
| M/WBE total   | 0.00        | 26.78        | 0.00            |
| Administrative and Support Services (NAICS 561)           |             |              |                 |
| African-American  | 0.00        | 15.28        | 0.00 *          |
| Hispanic  | 0.00        | 1.89         | 0.00            |
| Asian   | 0.00        | 1.19         | 0.00            |
| Native  | 0.00        | 1.50         | 0.00            |
| Minority-owned  | 0.00        | 19.86        | 0.00 **         |
| Non-minority female                                       | 60.37       | 47.92        | .               |
| M/WBE total   | 60.37       | 67.78        | 89.07           |
| Computer and Electronic Product Manufacturing (NAICS 334) |             |              |                 |
| African-American  | 0.00        | 8.22         | 0.00            |
| Hispanic  | 0.00        | 0.32         | 0.00            |
| Asian   | 0.00        | 1.17         | 0.00            |
| Native  | 0.00        | 0.04         | 0.00            |
| Minority-owned  | 0.00        | 9.74         | 0.00            |
| Non-minority female                                       | 0.00        | 8.38         | 0.00            |
| M/WBE total   | 0.00        | 18.13        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                           | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Construction of Buildings (NAICS 236)                     |             |              |                 |
| African-American  | 99.95       | 20.47        | .               |
| Hispanic  | 0.00        | 4.03         | 0.00            |
| Asian   | 0.00        | 0.03         | 0.00            |
| Native  | 0.00        | 0.40         | 0.00            |
| Minority-owned  | 99.95       | 24.93        | .               |
| Non-minority female                                       | 0.00        | 11.48        | 0.00            |
| M/WBE total   | 99.95       | 36.41        | .               |
| Waste Management and Remediation Services (NAICS 562)     |             |              |                 |
| African-American  | 0.00        | 8.47         | 0.00            |
| Hispanic  | 0.00        | 0.25         | 0.00            |
| Asian   | 0.00        | 1.38         | 0.00            |
| Native  | 93.26       | 0.83         | .               |
| Minority-owned  | 93.26       | 10.93        | .               |
| Non-minority female                                       | 0.00        | 24.81        | 0.00            |
| M/WBE total   | 93.26       | 35.73        | .               |
| Telecommunications (NAICS 517)                            |             |              |                 |
| African-American  | 0.00        | 26.65        | 0.00            |
| Hispanic  | 0.00        | 0.21         | 0.00            |
| Asian   | 0.00        | 3.86         | 0.00            |
| Native  | 0.00        | 0.60         | 0.00            |
| Minority-owned  | 0.00        | 31.32        | 0.00            |
| Non-minority female                                       | 0.00        | 23.65        | 0.00            |
| M/WBE total   | 0.00        | 54.97        | 0.00            |
| Data Processing, Hosting and Related Services (NAICS 518) |             |              |                 |
| African-American  | 0.00        | 58.20        | 0.00 **         |
| Hispanic  | 0.00        | 3.09         | 0.00            |
| Asian   | 0.00        | 0.54         | 0.00            |
| Native  | 0.00        | 0.39         | 0.00            |
| Minority-owned  | 0.00        | 62.21        | 0.00 **         |
| Non-minority female                                       | 0.00        | 33.25        | 0.00            |
| M/WBE total   | 0.00        | 95.46        | 0.00 **         |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                      | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Heavy and Civil Engineering Construction (NAICS 237) |             |              |                 |
| African-American                                     | 0.00        | 5.14         | 0.00            |
| Hispanic   | 0.00        | 0.46         | 0.00            |
| Asian  | 0.00        | 0.04         | 0.00            |
| Native   | 0.00        | 0.33         | 0.00            |
| Minority-owned                                       | 0.00        | 5.96         | 0.00            |
| Non-minority female                                  | 0.00        | 17.08        | 0.00            |
| M/WBE total  | 0.00        | 23.04        | 0.00            |
| Electronics and Appliance Stores (NAICS 443)         |             |              |                 |
| African-American                                     | 0.00        | 27.07        | 0.00            |
| Hispanic   | 0.00        | 0.21         | 0.00            |
| Asian  | 0.00        | 12.45        | 0.00            |
| Native   | 0.00        | 0.88         | 0.00            |
| Minority-owned                                       | 0.00        | 40.61        | 0.00 *          |
| Non-minority female                                  | 0.00        | 28.34        | 0.00            |
| M/WBE total  | 0.00        | 68.95        | 0.00 **         |
| Textile Product Mills (NAICS 314)                    |             |              |                 |
| African-American                                     | 0.00        | 0.63         | 0.00            |
| Hispanic   | 0.00        | 0.31         | 0.00            |
| Asian  | 0.00        | 1.26         | 0.00            |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned                                       | 0.00        | 2.20         | 0.00            |
| Non-minority female                                  | 0.00        | 57.23        | 0.00            |
| M/WBE total  | 0.00        | 59.43        | 0.00            |
| Truck Transportation (NAICS 484)                     |             |              |                 |
| African-American                                     | 0.00        | 15.97        | 0.00            |
| Hispanic   | 0.00        | 0.74         | 0.00            |
| Asian  | 0.00        | 1.23         | 0.00            |
| Native   | 0.00        | 0.68         | 0.00            |
| Minority-owned                                       | 0.00        | 18.61        | 0.00            |
| Non-minority female                                  | 0.00        | 16.47        | 0.00            |
| M/WBE total  | 0.00        | 35.08        | 0.00            |

Source and Notes: See Table 7.10.

# M/WBE Utilization and Disparity in ARC's Markets

**Table 7.14. Industry Sub-Sector Disparity Results for ARC Commodities Contracting**

| Procurement Category / DBE Type                           | Utilization | Availability | Disparity Index |    |
|---|-------------|--------------|-----------------|----|
| Merchant Wholesalers, Nondurable Goods (NAICS 424)        |             |              |                 |    |
| African-American  | 1.90        | 2.32         | 81.88           |    |
| Hispanic  | 0.00        | 0.61         | 0.00            |    |
| Asian   | 0.00        | 2.39         | 0.00            | ** |
| Native  | 0.00        | 0.26         | 0.00            |    |
| Minority-owned  | 1.90        | 5.57         | 34.04           | ** |
| Non-minority female                                       | 0.38        | 18.72        | 2.02            | ** |
| M/WBE total   | 2.28        | 24.29        | 9.37            | ** |
| Merchant Wholesalers, Durable Goods (NAICS 423)           |             |              |                 |    |
| African-American  | 0.71        | 4.00         | 17.67           |    |
| Hispanic  | 0.00        | 0.65         | 0.00            |    |
| Asian   | 0.00        | 3.86         | 0.00            |    |
| Native  | 0.00        | 0.28         | 0.00            |    |
| Minority-owned  | 0.71        | 8.78         | 8.05            | *  |
| Non-minority female                                       | 0.31        | 19.22        | 1.62            | ** |
| M/WBE total   | 1.02        | 28.01        | 3.64            | ** |
| Motor Vehicle and Parts Dealers (NAICS 441)               |             |              |                 |    |
| African-American  | 4.62        | 2.06         | .               |    |
| Hispanic  | 0.00        | 0.51         | 0.00            |    |
| Asian   | 0.00        | 2.12         | 0.00            |    |
| Native  | 0.00        | 0.07         | 0.00            |    |
| Minority-owned  | 4.62        | 4.76         | 97.11           |    |
| Non-minority female                                       | 0.00        | 17.38        | 0.00            |    |
| M/WBE total   | 4.62        | 22.14        | 20.87           |    |
| Computer and Electronic Product Manufacturing (NAICS 334) |             |              |                 |    |
| African-American  | 0.00        | 29.86        | 0.00            | ** |
| Hispanic  | 0.00        | 1.36         | 0.00            |    |
| Asian   | 0.00        | 15.12        | 0.00            | ** |
| Native  | 0.00        | 0.49         | 0.00            |    |
| Minority-owned  | 0.00        | 46.83        | 0.00            | ** |
| Non-minority female                                       | 0.00        | 35.69        | 0.00            | ** |
| M/WBE total   | 0.00        | 82.52        | 0.00            | ** |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                              | Utilization | Availability | Disparity Index |    |
|--|-------------|--------------|-----------------|----|
| Heavy and Civil Engineering Construction (NAICS 237)         |             |              |                 |    |
| African-American   | 0.00        | 9.96         | 0.00            |    |
| Hispanic   | 0.00        | 0.01         | 0.00            |    |
| Asian  | 0.00        | 0.00         | 0.00            |    |
| Native   | 0.00        | 0.00         | 0.00            |    |
| Minority-owned   | 0.00        | 9.97         | 0.00            |    |
| Non-minority female  | 0.00        | 27.85        | 0.00            |    |
| M/WBE total  | 0.00        | 37.83        | 0.00            |    |
| Electronics and Appliance Stores (NAICS 443)                 |             |              |                 |    |
| African-American   | 0.00        | 25.79        | 0.00            | ** |
| Hispanic   | 0.00        | 0.21         | 0.00            |    |
| Asian  | 0.00        | 11.81        | 0.00            | ** |
| Native   | 0.00        | 0.85         | 0.00            |    |
| Minority-owned   | 0.00        | 38.66        | 0.00            | ** |
| Non-minority female  | 0.00        | 27.34        | 0.00            | ** |
| M/WBE total  | 0.00        | 66.01        | 0.00            | ** |
| Professional, Scientific, and Technical Services (NAICS 541) |             |              |                 |    |
| African-American   | 0.00        | 27.77        | 0.00            |    |
| Hispanic   | 0.00        | 2.59         | 0.00            |    |
| Asian  | 0.00        | 12.71        | 0.00            |    |
| Native   | 0.00        | 0.56         | 0.00            |    |
| Minority-owned   | 0.00        | 43.62        | 0.00            | ** |
| Non-minority female  | 0.00        | 21.36        | 0.00            |    |
| M/WBE total  | 0.00        | 64.98        | 0.00            | ** |
| Specialty Trade Contractors (NAICS 238)                      |             |              |                 |    |
| African-American   | 2.18        | 10.35        | 21.04           |    |
| Hispanic   | 0.00        | 1.54         | 0.00            |    |
| Asian  | 0.00        | 0.38         | 0.00            |    |
| Native   | 0.00        | 1.07         | 0.00            |    |
| Minority-owned   | 2.18        | 13.34        | 16.32           |    |
| Non-minority female  | 0.00        | 10.74        | 0.00            |    |
| M/WBE total  | 2.18        | 24.08        | 9.04            |    |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                                  | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| <b>Rental and Leasing Services (NAICS 532)</b>                   |             |              |                 |
| African-American   | 0.00        | 8.70         | 0.00            |
| Hispanic   | 0.00        | 0.12         | 0.00            |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.80         | 0.00            |
| Minority-owned   | 0.00        | 11.09        | 0.00            |
| Non-minority female  | 0.00        | 15.69        | 0.00            |
| M/WBE total  | 0.00        | 26.78        | 0.00            |
| <b>Waste Management and Remediation Services (NAICS 562)</b>     |             |              |                 |
| African-American   | 0.00        | 9.05         | 0.00            |
| Hispanic   | 0.00        | 0.04         | 0.00            |
| Asian  | 0.00        | 1.25         | 0.00            |
| Native   | 0.00        | 0.69         | 0.00            |
| Minority-owned   | 0.00        | 11.03        | 0.00            |
| Non-minority female  | 0.00        | 11.93        | 0.00            |
| M/WBE total  | 0.00        | 22.97        | 0.00            |
| <b>Publishing Industries (except Internet) (NAICS 511)</b>       |             |              |                 |
| African-American   | 0.00        | 28.52        | 0.00 *          |
| Hispanic   | 0.00        | 2.29         | 0.00            |
| Asian  | 0.00        | 8.64         | 0.00            |
| Native   | 0.00        | 2.87         | 0.00            |
| Minority-owned   | 0.00        | 42.32        | 0.00 **         |
| Non-minority female  | 0.00        | 14.64        | 0.00            |
| M/WBE total  | 0.00        | 56.96        | 0.00 **         |
| <b>Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)</b> |             |              |                 |
| African-American   | 0.00        | 1.15         | 0.00            |
| Hispanic   | 0.00        | 0.52         | 0.00            |
| Asian  | 0.00        | 2.21         | 0.00            |
| Native   | 0.00        | 1.31         | 0.00            |
| Minority-owned   | 0.00        | 5.19         | 0.00            |
| Non-minority female  | 0.00        | 18.73        | 0.00            |
| M/WBE total  | 0.00        | 23.92        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                        | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Mining (except Oil and Gas)<br>(NAICS 212)             |             |              |                 |
| African-American                                       | 0.00        | 1.26         | 0.00            |
| Hispanic   | 0.00        | 0.63         | 0.00            |
| Asian  | 0.00        | 2.52         | 0.00            |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned   | 0.00        | 4.40         | 0.00            |
| Non-minority female                                    | 0.00        | 14.47        | 0.00            |
| M/WBE total  | 0.00        | 18.87        | 0.00            |
| Printing and Related Support<br>Activities (NAICS 323) |             |              |                 |
| African-American                                       | 0.00        | 9.91         | 0.00            |
| Hispanic   | 0.00        | 0.41         | 0.00            |
| Asian  | 0.00        | 2.12         | 0.00            |
| Native   | 0.00        | 0.49         | 0.00            |
| Minority-owned   | 0.00        | 12.93        | 0.00            |
| Non-minority female                                    | 0.00        | 26.56        | 0.00            |
| M/WBE total  | 0.00        | 39.49        | 0.00            |
| Miscellaneous Manufacturing<br>(NAICS 339)             |             |              |                 |
| African-American                                       | 0.00        | 1.29         | 0.00            |
| Hispanic   | 0.00        | 0.72         | 0.00            |
| Asian  | 0.00        | 2.20         | 0.00            |
| Native   | 0.00        | 0.83         | 0.00            |
| Minority-owned   | 0.00        | 5.04         | 0.00            |
| Non-minority female                                    | 0.00        | 36.71        | 0.00            |
| M/WBE total  | 0.00        | 41.75        | 0.00            |
| Ambulatory Health Care Services<br>(NAICS 621)         |             |              |                 |
| African-American                                       | 0.00        | 8.82         | 0.00            |
| Hispanic   | 0.00        | 0.00         | .               |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.74         | 0.00            |
| Minority-owned   | 0.00        | 11.03        | 0.00            |
| Non-minority female                                    | 0.00        | 10.29        | 0.00            |
| M/WBE total  | 0.00        | 21.32        | 0.00            |



## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                    | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Chemical Manufacturing (NAICS 325)                 |             |              |                 |
| African-American                                   | 0.00        | 1.26         | 0.00            |
| Hispanic   | 0.00        | 0.63         | 0.00            |
| Asian  | 0.00        | 2.52         | 0.00            |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned                                     | 0.00        | 4.40         | 0.00            |
| Non-minority female                                | 25.88       | 14.47        | .               |
| M/WBE total  | 25.88       | 18.87        | .               |
| Fabricated Metal Product Manufacturing (NAICS 332) |             |              |                 |
| African-American                                   | 0.00        | 1.19         | 0.00            |
| Hispanic   | 0.00        | 0.39         | 0.00            |
| Asian  | 0.00        | 2.80         | 0.00            |
| Native   | 0.00        | 1.25         | 0.00            |
| Minority-owned                                     | 0.00        | 5.63         | 0.00            |
| Non-minority female                                | 0.00        | 37.19        | 0.00            |
| M/WBE total  | 0.00        | 42.82        | 0.00            |
| Machinery Manufacturing (NAICS 333)                |             |              |                 |
| African-American                                   | 0.00        | 30.18        | 0.00            |
| Hispanic   | 0.00        | 33.54        | 0.00            |
| Asian  | 0.00        | 0.84         | 0.00            |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned                                     | 0.00        | 64.56        | 0.00            |
| Non-minority female                                | 0.00        | 8.39         | 0.00            |
| M/WBE total  | 0.00        | 72.96        | 0.00            |
| Telecommunications (NAICS 517)                     |             |              |                 |
| African-American                                   | 0.00        | 22.52        | 0.00            |
| Hispanic   | 0.00        | 0.14         | 0.00            |
| Asian  | 0.00        | 4.76         | 0.00            |
| Native   | 0.00        | 0.62         | 0.00            |
| Minority-owned                                     | 0.00        | 28.04        | 0.00            |
| Non-minority female                                | 0.00        | 17.29        | 0.00            |
| M/WBE total  | 0.00        | 45.33        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                 | Utilization | Availability | Disparity Index |
|---|-------------|--------------|-----------------|
| Paper Manufacturing (NAICS 322)                 |             |              |                 |
| African-American                                | 0.00        | 0.00         | .               |
| Hispanic  | 0.00        | 100.00       | 0.00            |
| Asian   | 0.00        | 0.00         | .               |
| Native  | 0.00        | 0.00         | .               |
| Minority-owned                                  | 0.00        | 100.00       | 0.00            |
| Non-minority female                             | 0.00        | 0.00         | .               |
| M/WBE total                                     | 0.00        | 100.00       | 0.00            |
| Administrative and Support Services (NAICS 561) |             |              |                 |
| African-American                                | 0.00        | 14.47        | 0.00            |
| Hispanic  | 0.00        | 0.14         | 0.00            |
| Asian   | 0.00        | 1.33         | 0.00            |
| Native  | 0.00        | 0.71         | 0.00            |
| Minority-owned                                  | 0.00        | 16.64        | 0.00            |
| Non-minority female                             | 0.00        | 13.83        | 0.00            |
| M/WBE total                                     | 0.00        | 30.47        | 0.00            |
| Miscellaneous Store Retailers (NAICS 453)       |             |              |                 |
| African-American                                | 0.00        | 0.69         | 0.00            |
| Hispanic  | 0.00        | 0.28         | 0.00            |
| Asian   | 0.00        | 5.67         | 0.00            |
| Native  | 0.00        | 1.10         | 0.00            |
| Minority-owned                                  | 0.00        | 7.74         | 0.00            |
| Non-minority female                             | 0.00        | 41.26        | 0.00            |
| M/WBE total                                     | 0.00        | 49.00        | 0.00            |
| Truck Transportation (NAICS 484)                |             |              |                 |
| African-American                                | 0.00        | 17.95        | 0.00            |
| Hispanic  | 0.00        | 0.60         | 0.00            |
| Asian   | 0.00        | 1.24         | 0.00            |
| Native  | 0.00        | 0.68         | 0.00            |
| Minority-owned                                  | 0.00        | 20.47        | 0.00            |
| Non-minority female                             | 0.00        | 16.13        | 0.00            |
| M/WBE total                                     | 0.00        | 36.60        | 0.00            |

## M/WBE Utilization and Disparity in ARC's Markets

| Procurement Category / DBE Type                    | Utilization | Availability | Disparity Index |
|--|-------------|--------------|-----------------|
| Repair and Maintenance (NAICS 811)                 |             |              |                 |
| African-American                                   | 0.00        | 9.08         | 0.00            |
| Hispanic   | 0.00        | 0.25         | 0.00            |
| Asian  | 0.00        | 2.86         | 0.00            |
| Native   | 0.00        | 0.69         | 0.00            |
| Minority-owned                                     | 0.00        | 12.88        | 0.00            |
| Non-minority female                                | 0.00        | 17.26        | 0.00            |
| M/WBE total  | 0.00        | 30.14        | 0.00            |
| Transportation Equipment Manufacturing (NAICS 336) |             |              |                 |
| African-American                                   | 0.00        | 1.26         | 0.00            |
| Hispanic   | 0.00        | 0.63         | 0.00            |
| Asian  | 0.00        | 2.52         | 0.00            |
| Native   | 0.00        | 0.00         | .               |
| Minority-owned                                     | 0.00        | 4.40         | 0.00            |
| Non-minority female                                | 0.00        | 14.47        | 0.00            |
| M/WBE total  | 0.00        | 18.87        | 0.00            |
| Personal and Laundry Services (NAICS 812)          |             |              |                 |
| African-American                                   | 0.00        | 8.82         | 0.00            |
| Hispanic   | 0.00        | 0.00         | .               |
| Asian  | 0.00        | 1.47         | 0.00            |
| Native   | 0.00        | 0.74         | 0.00            |
| Minority-owned                                     | 0.00        | 11.03        | 0.00            |
| Non-minority female                                | 0.00        | 10.29        | 0.00            |
| M/WBE total  | 0.00        | 21.32        | 0.00            |

Source and Notes: See Table 7.10.

## M/WBE Utilization and Disparity in ARC's Markets

**Table 7.15. Current Availability and Expected Availability**

| <b>Procurement Category</b> | <b>M/WBE Type</b>   | <b>Current Availability</b> | <b>Expected Availability</b> |
|-----------------------------|---------------------|-----------------------------|------------------------------|
| <b>All</b>                  | African-American:   | 14.26                       | 32.41                        |
|                             | Hispanic            | 2.52                        | 3.93                         |
|                             | Asian               | 1.87                        | 2.02                         |
|                             | Native American     | 0.58                        | 0.89                         |
|                             | Minority total      | 19.23                       | 39.25                        |
|                             | Non-minority female | 15.41                       | 14.82                        |
|                             | M/WBE total         | 34.64                       | 40.00                        |
| <b>Construction</b>         | African-American:   | 15.22                       | 36.76                        |
|                             | Hispanic            | 2.70                        | 3.73                         |
|                             | Asian               | 0.63                        | -                            |
|                             | Native American     | 0.58                        | -                            |
|                             | Minority total      | 19.13                       | n/a                          |
|                             | Non-minority female | 13.24                       | 19.16                        |
|                             | M/WBE total         | 32.37                       | 55.43                        |
| <b>CRS</b>                  | African-American:   | 13.36                       | 32.27                        |
|                             | Hispanic            | 2.78                        | 3.84                         |
|                             | Asian               | 5.84                        | -                            |
|                             | Native American     | 0.62                        | -                            |
|                             | Minority total      | 22.60                       | n/a                          |
|                             | Non-minority female | 22.33                       | 32.32                        |
|                             | M/WBE total         | 44.93                       | 76.93                        |
| <b>Services</b>             | African-American:   | 13.11                       | 27.43                        |
|                             | Hispanic            | 2.01                        | 3.67                         |
|                             | Asian               | 4.45                        | 5.42                         |
|                             | Native American     | 0.71                        | 1.04                         |
|                             | Minority total      | 20.28                       | 37.56                        |
|                             | Non-minority female | 19.82                       | 18.03                        |
|                             | M/WBE total         | 40.11                       | 44.62                        |
| <b>Commodities</b>          | African-American:   | 6.52                        | 13.64                        |
|                             | Hispanic            | 0.76                        | 1.39                         |
|                             | Asian               | 3.84                        | 4.68                         |
|                             | Native American     | 0.29                        | 0.42                         |
|                             | Minority total      | 11.41                       | 20.13                        |
|                             | Non-minority female | 19.13                       | 17.41                        |
|                             | M/WBE total         | 30.54                       | 33.97                        |

Source: See Tables 4.17 and 5.21.

Note: A dash indicates the corresponding disparity ratio from Table 5.21 was 0 and expected availability could therefore not be calculated (i.e. cannot divide by zero). "n/a" indicates that expected MBE availability could not be calculated since expected Asian availability and expected Native American availability could not be calculated.

### VIII. Anecdotal Evidence of Disparities in ARC's Marketplace

We have presented a variety of economic and statistical findings above that are consistent with and indicative of the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to ARC's contracting and procurement activities. Chapters V and VI in particular have documented large and statistically significant adverse disparities in ARC's relevant markets impacting minority and female entrepreneurs. Commercial loan denial rates are higher, the cost of credit is higher, business formation rates are lower, and business owner earnings are lower—even when comparisons are restricted to similarly situated businesses and business owners.

As a further check on these findings, we investigated anecdotal evidence of disparities in ARC's marketplace. First, we conducted a large scale survey of business establishments in these markets—both M/WBE and non-M/WBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination. We find that M/WBEs in ARC's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant when firm size and owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses, and that these differences are statistically significant in many cases. Additionally, we find that M/WBE firms that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, even more tellingly, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by ARC and other public entities in the Augusta area shows that business discrimination continues to fetter M/WBE business opportunities in ARC's relevant markets. We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

Next, we conducted in-depth personal interviews with minority, women and majority business owners about their experiences in seeking and performing contracts in ARC's marketplace. These focus groups confirmed the results of the statistical evidence and the mail surveys: minorities and women encounter significant barriers to the success of their firms in seeking public and private sector work, and these barriers are often the result of discrimination.

The remainder of this Chapter is organized as follows. We first discuss the mail survey results in Section A. In Section A.1, we discuss the survey questionnaire, sample frame, and response rate. Section A.2 presents evidence on willingness of firms to do business with the public sector. Section A.3 presents the key findings from the M/WBE and non-M/WBE respondents concerning disparate treatment. Section A.4 documents disparities in firm experience and size among M/WBE and non-M/WBE respondents. Section A.5 presents the key findings concerning the impact of the regular business environment on M/WBEs' ability to conduct their businesses. Section A.6 presents key findings to our questions concerning whether prime contractors solicit or hire M/WBEs for work on public or private contracts without M/WBE goals. Section A.7 then

examines whether M/WBEs and non-M/WBEs that responded to the mail surveys are representative of all M/WBEs and non-M/WBEs in the relevant markets. To do so, we surveyed a random sample of M/WBEs and non-M/WBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents.

Finally, Section B describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing M/WBEs and non-M/WBEs.

### **A. Business Experience Surveys**

#### **1. Survey Questionnaire, Sample, and Responses**

The survey questionnaires asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in ARC's relevant markets. We also asked about the relative frequency with which firms that have been used as subcontractors, subconsultants, or suppliers by prime contractors on contracts *with* M/WBE goals have been hired to work, or even solicited to bid, on similar contracts *without* M/WBE goals. Finally, we posed questions about the characteristics of the firm, including firm age, owner's education, employment size, and revenue size to facilitate comparisons of similarly situated firms.

The mail survey sample was stratified by industry and drawn directly from the Master M/WBE Directory and the Baseline Business Universe compiled for this study. Firms were sampled randomly within strata. M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs.<sup>206</sup> Of 7,523 businesses that received the questionnaire,<sup>207</sup> 829 (11.0 percent) provided usable responses.<sup>208</sup> The distribution of total responses according to the race and sex of the business owner, by major procurement category, appears in Table 8.1.

#### **2. Willingness of Firms to Contract with the Public Sector**

The probative value of anecdotal evidence of discrimination increases when it comes from active businesses in the relevant geographic and procurement markets. The value of such evidence increases further when it comes from firms that have actually worked or attempted to work for the public sector within those markets. Such is the present case.

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<sup>206</sup> See Chapter III for a discussion of how the product and geographic markets were defined. See Chapter IV for discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

<sup>207</sup> These figures exclude surveys that were returned undelivered or otherwise undeliverable.

<sup>208</sup> The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

As shown below in Table 8.2, there is a strong linkage between the firms responding to our mail survey and the public sector of the Augusta area economy. All respondents operate establishments in the relevant geographic and product markets. Moreover, significant numbers of survey respondents have worked or attempted to do work for ARC or other public entities in the Augusta area in the last five years. This is observed for virtually all types of M/WBEs and non-M/WBEs in all procurement categories. Overall, almost two-thirds of non-M/WBEs and three-fifths of M/WBEs have worked or attempted to work for ARC or some other public entity in the Augusta area in the previous five years. This phenomenon is especially apparent for M/WBEs and non-M/WBEs in Construction and in CRS.

### 3. Experiences of Disparate Treatment in Business Dealings

The survey included questions about instances of disparate treatment based on race and/or sex experienced in various business dealings during the past five years. As shown in the last row of Table 8.3, 42 percent of all M/WBE firms said they had experienced at least one instance of disparate treatment in one or more areas of business dealings identified on the survey. Reports of disparate treatment were substantially and significantly higher for minorities than for non-minorities, casting doubt on claims of widespread “reverse discrimination.” Reports were highest among African-Americans, with an overall rate of almost 60 percent. Similar patterns were observed when the results were disaggregated by procurement category.

The balance of Table 8.3 show results for each of 14 distinct types of disparate treatment inquired about in the survey. In all categories, the difference in reported amounts of disparate treatment between M/WBEs and non-M/WBEs is large. In applying for commercial loans, for example, M/WBEs reported being discriminated almost 8 times more frequently than non-minority males. In obtaining price quotes from supplies it was 10 times more frequent.<sup>209</sup>

Even where differences are smallest, M/WBEs report being discriminated against twice as frequently as non-M/WBEs. The figures for M/WBEs are between 3 and 10 times higher than for non-M/WBEs in attempting to obtain work on private sector prime contracts and subcontracts, dealing with trade associations, applying for surety bonds, applying for commercial or professional insurance, and hiring workers from union hiring halls.

Evidence of the impact of public sector M/WBE programs is seen in that the smallest differences between M/WBEs and non-M/WBEs appear in the categories of working or attempting to work on public sector subcontracts—although even here the figures are still 1.9 and 2.2 times higher, respectively, for M/WBEs than for non-M/WBEs.

Table 8.4 represents the same disparate treatment information as in Table 8.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked by each group according to the frequency with which disparate treatment was reported, with “1” representing the most frequent and “14” representing the least frequent.

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<sup>209</sup> Discrimination in access to commercial credit and capital is the most widely and commonly cited problem facing minority-owned firms. See Chapter VI for an extensive discussion of the theory and analysis of the evidence behind this phenomenon.

As the table makes clear, there is a high degree of correlation among the rankings—that is, problems that ranked high on one group's list tended to be high on the other groups' lists and vice-versa.<sup>210</sup> The worst problem overall for M/WBEs was receiving timely payment for work performed. This was followed closely by working or attempting to work on public sector subcontracts, working or attempting to work on public sector prime contracts, and working or attempting to work on private sector prime contracts.

Some courts and other observers have asserted that findings such as those in Table 8.3 tell us nothing about discrimination against M/WBEs since, even though they are current, even though they come directly from the businesses alleging disparate treatment, even though they are restricted to the relevant geographic and product markets, even though they are disaggregated by procurement category, and even though they are disaggregated by race and sex, they still do not compare firms of similar size, qualifications, or experience. We have argued elsewhere against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination (Wainwright, 2000, 86-87). Nevertheless, if disparities are still observed even when such “capacity” factors are held constant, the case becomes even more compelling. **The results reported below in Table 8.5 show that even when levels of size, qualifications, and experience are held constant across firms, disparate treatment of both minorities and non-minority women is still very evident.**

In Table 8.5, we report the results from a series of Probit regressions using the mail survey data on disparate treatment.<sup>211</sup> As indicated earlier, the survey questionnaire collected data related to each firm's size, qualifications, and experience. The reported estimates from these models can be interpreted as changes or differences in the probability of disparate treatment conditional on the control variables. The estimates in the table show large differences in disparate treatment probabilities between M/WBEs and non-M/WBEs. In column (1) of Table 8.5 (in which the regression model contains only M/WBE status and procurement category indicators), the estimated coefficient of 0.116 on the M/WBE indicator indicates that the likelihood of experiencing disparate treatment for M/WBE firms is 11.6 percentage points higher than that for non-M/WBE firms.<sup>212</sup> This difference is statistically significant within a 99 percent confidence interval or better. Column (2) of Table 8.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or sex, including the owner's education, the age of the firm, and the size of the firm measured by employment and by sales. Even after controlling for these differences, however, M/WBE firms remain 10.9 percentage points more likely than non-M/WBE firms to experience disparate treatment. This difference is also statistically significant within a 99 percent confidence interval. Firm size and

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<sup>210</sup> Kendall's rank correlation statistic for the African-American, Hispanic, Asian, Native American, and non-minority female rankings in Table 8.4 is 0.678, which is statistically significant within a 99% or better confidence interval. For more on this statistic, see Goldstein (1991).

<sup>211</sup> See Chapter V for a description of Probit regression.

<sup>212</sup> This estimate largely replicates the raw difference in disparate treatment rates between M/WBE and non-M/WBE firms reported in the last row of Table 8.3. The raw differential observed there ( $59.5\% - 26.2\% = 33.3\%$ ) differs slightly from the 35.5% differential reported here since the regression specification also controls for industry category.



other characteristics account for little of the disparate treatment reported by M/WBEs in the Augusta region.

The exercise is repeated in columns (3) and (4). The only difference is that the M/WBE indicator is separated into two components—one for minority-owned firms and one for non-minority-female owned firms. The results in column (3) indicate that minority-owned firms in the Augusta region are 14.5 percentage points more likely to experience disparate treatment than non-M/WBE firms. When controls are added in column (4), this difference declines only slightly to 14.3 percent. Non-minority female-owned firms are 5.3 and 4.2 percentage points more likely to experience disparate treatment, respectively, but these differences are not statistically significant.

The exercise is repeated again in columns (5) and (6) with separate indicators for each type of M/WBE. The results for non-minority females are nearly identical to those in columns (3) and (4). For African-American-owned firms, the differential is 33.9 percentage points in column (5), actually rising to 36.3 once controls are added. Differences for other minority-owned firms and non-minority females are positive but not statistically significant.

The regression models reported in Table 8.5 used as their dependent variable an indicator of whether or not a survey respondent had been treated less favorably in any of the 14 different types of business dealings described in the first column of Table 8.3.<sup>213</sup> We re-estimated the regression model reported in Column (2) of Table 8.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 8.6. As Table 8.6 shows, African-American-owned firms in particular experience a wide variety of disparate treatment compared to non-M/WBEs. In all cases, these differences are both large and statistically significant.

#### **4. Impact of Current Business Environment on Ability to Win Contracts**

The survey asked questions about some common features of the business environment to determine which factors were perceived by M/WBEs as serious impediments to obtaining contracts.

As Table 8.7 makes clear, substantial percentages of both M/WBEs and non-M/WBEs report that certain factors, such as “Late notice of bid/proposal deadlines” and “Large project sizes,” make it harder or impossible for firms to obtain contracts. Among non-M/WBEs, for example, 33.6 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, and 21.5 percent reported that large project sizes made it harder or impossible for them to win contracts. The figures for M/WBEs, however, at 33.8 percent and 34.1 percent, respectively, are even greater than for non-M/WBEs. Indeed, as Table 8.7 shows, M/WBEs reported more difficulty on 8 out of the 9 factors about which they were polled.

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<sup>213</sup> Our disparate treatment question also allowed respondents to indicate the quantity of disparate treatment experienced (never, 1-5 times, 6-20 times, more than 20-times). Although not reported here, we also ran regressions using a dependent variable measuring high frequency of disparate treatment (6 or more times) during the prior five years. Results were more limited due to smaller sample sizes but were qualitatively similar to those obtained in Tables 8.5 and 8.6.

To control for firm and owner characteristics, we used a regression technique known as ordered Probit.<sup>214</sup> Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—helps me (1), no effect (2), makes it harder (3), and makes it impossible (4)—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, the education level of the primary owner of the firm, and the major industry group. To report results from ordered Probit analysis, we use a “+” to indicate that M/WBEs had more difficulty than non-M/WBEs with similar firm characteristics, and a “-” to indicate that M/WBEs had less difficulty than non-M/WBEs with similar firm characteristics.

Table 8.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, all but two of the factors we inquired about prove to be greater difficulties for M/WBEs than for non-M/WBEs (as indicated by the “+” sign). In particular, the disparities in “Bonding requirements,” and “Prior dealings with owner” are statistically significant with respect to non-M/WBEs.

### **5. Solicitation and Use of M/WBEs on Public and Private Projects Without Affirmative Action Goals**

Our second to last survey question asked, “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses also hire your firm on projects (public or private) *without* such goals or requirements?” As Table 8.9 shows, more than 73 percent of African-American-owned firms, 83 percent of Hispanic-owned firms, 75 percent of Asian-owned firms, 86 percent of Native American-owned firms, and 58 percent of non-minority female-owned firms responded that this seldom or never occurs. Similar results were observed in each major procurement category as well.

At least one court has held that the failure of prime contractors to even *solicit* qualified minority- and women-owned firms is a “market failure” that serves to establish a government’s compelling interest in remedying that failure.<sup>215</sup> Among the evidence relied upon for this holding was a NERA survey similar to the current one in which approximately 50 percent of the respondents reported that they were seldom or never solicited for non-goals work.<sup>216</sup>

Our final survey question therefore asked “How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) without such goals or requirements?” Responses to this question are tabulated in Table 8.10, which shows the same pattern as in Table 8.9. In Table 8.10, more than 67 percent of African-American-owned firms, 80 percent of Hispanic-owned firms, 75 percent of Asian-owned firms, 84 percent of Native

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<sup>214</sup> For a textbook discussion of ordered Probit, see, for example, Greene (1997).

<sup>215</sup> *Builders Association of Greater Chicago v. Authority of Chicago*, 298 F.Supp.2d 725, 737 (N.D. Ill. 2003).

<sup>216</sup> *Id.*

American-owned firms, and 59 percent of non-minority female-owned firms responded that this seldom or never occurs. Similar results were observed in each major procurement category as well.

### 6. Survey Non-Response

We conducted telephone surveys of M/WBEs and non-M/WBEs that did not respond to the mail surveys. The purpose of these telephone surveys was to test for evidence of a non-response bias that could affect the results from the original mail surveys. A non-response bias is said to exist when respondents' answers are systematically different from the answers of non-respondents. To conduct non-response surveys, we attempted to contact a random sample of 1,087 M/WBEs and non-M/WBEs that did not respond to our mail surveys to elicit answers to select questions asked in the original mail surveys. We obtained responses from 457 firms, for a response rate of 42.0 percent. The effective response rate, however, was 55.4 percent, since 262 numbers dialed were unreachable, typically because the number was not in service or was not or was no longer a business number.

Of the non-respondent firms we completed interviews with, 15.0 percent were minority-owned, compared with a rate of 30.8 percent in the mail survey. The percentage of women-owned firms was 21.9 percent, compared to 22.7 percent in the mail survey. The percentage of MBEs is significantly different between the respondents and non-respondents. The percentage of WBEs is not.

According to the results of the non-response surveys, 5.8 percent of the M/WBEs said bonding requirements made it harder or impossible to obtain contracts. This difference is significantly different from the 13.8 percent of M/WBEs that said this in the mail survey. However, a similar result was observed for non-M/WBEs. That is, among the non-M/WBEs that did not respond to the mail survey, 6.1 percent said that bonding requirements made it harder or impossible to obtain contracts, compared to 10.2 percent of non-M/WBE respondents. Nevertheless, the disparity between M/WBEs and non-M/WBEs was less pronounced among the non-respondents than among the respondents.

According to the results of the non-response surveys, 2.2 percent of the M/WBEs that did not respond to our mail survey said they had experienced at least one instance of discrimination in the last five years while seeking credit for their business. This is significantly different from the 12.5 percent of M/WBEs that said this in the mail survey. Among the non-M/WBEs that did not respond to the mail survey the figure was 6.6 percent—an amount significantly different from the 2.0 percent reported by non-M/WBEs in the mail survey. In both the mail survey and the non-response surveys, therefore, a higher percentage of M/WBEs than non-M/WBEs indicated experiencing discrimination in credit opportunities. The disparity between M/WBEs and non-M/WBEs is less pronounced among the non-respondents than among the respondents.

According to the results of the non-response surveys, 3.6 percent of the M/WBEs that did not respond to our mail survey said they had experienced at least one instance of discrimination in the last five years while seeking price quotes from suppliers. This is significantly different from the 9.1 percent of M/WBEs that said this in the mail survey. Among the non-M/WBEs that did not respond to the mail survey the figure was 4.8 percent—an amount significantly different

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from the 1.1 percent reported by non-M/WBEs in the mail survey. In this case also, the disparity between M/WBEs and non-M/WBEs was less pronounced among the non-respondents than among the respondents. These and the foregoing results of the non-response surveys indicate that the disparities reported above in this Chapter should be interpreted with caution.

### **B. Business Owner Interviews**

To explore additional anecdotal evidence of possible discrimination against minorities and women in ARC's marketplace, we conducted six group interviews. We met with 114 business owners from a broad cross section of the industries from which ARC purchases services and goods. Firms ranged in size from large national businesses to new start-ups. Owners' backgrounds included individuals with decades of experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts.

This effort gathered individual perspectives to augment the statistical information from the business experience and credit access surveys. In general, interviewees' individual experiences mirrored the responses to the business experience surveys. We also elicited recommendations for improvements to ARC's current policies and procedures, reported below in Chapter IX.

The following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed over the many sessions by many participants.

#### **1. Perceptions of Competence and Higher Performance Standards**

Several minority and women owners reported that while progress has been made in integrating minorities and women into public and private sector contracting activities in the Augusta-Richmond County area and greater Georgia through affirmative action contracting programs, many barriers remain. Perhaps the most subtle and difficult to address is that of perceptions and stereotypes. These stereotypes about minorities' and women's of lack of competence infect all aspects of their attempts to obtain contracts and to be treated equally in performing contract work. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities in the business world.

They see me as a Black person, as a minority. They don't see me as a business person, and most of the time, they don't even take me seriously. They don't think I can do what the majority company can do. It's assumed right off the bat.

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Most of all, for a minority, we've got to put extra work into our project, no matter the size, a small job, a big job, a medium job, we have to put that extra energy into it, to get it to pass.

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## Anecdotal Evidence of Disparities in ARC's Marketplace

I have no proof, but I truly believe that me as a woman has been held to a higher standard on the project. I don't get on the floor and do it myself; I have subcontractors that do that. But I have been and seen circumstances, not just the City, other facilities. It doesn't matter. But I can go in and see the quality of a competitor, which would be horrendous, and I look at the job and I'm going, "How would this pass?" But yet I go in and do work, and it may have one little small thing that's fixable, but then I don't get paid for the job. I could be retired on the money that I have lost because contractors have not paid me for things like that when I've gone in and I've seen stuff that I physically could go in and do a better job than what I've seen on the floors. But I don't have proof, but I know that it does exist.

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Our company, even though we've been in business 23 years, we've won jobs before, had the best numbers, the best qualifications, but didn't get selected. We felt many times it was just because we were a minority company and the contract was so big, that they thought that we could not do that.

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[I]f they had a jaded experience previously, they automatically think that all DBEs or all MBEs are the same way. So, that immediately shuts down the door, and that [award] doesn't happen. I mean they might have the same issues with mainstream corporations in different situations, but for whatever reason, because of that status, it tends to impede opportunity. So, it's like, "I'm not going to let you in the door because I've tried X, Y, Z, and they let me down."... It's almost like they expect you to sprinkle magic dust ... and then when you do it, it's like, "Well, we didn't expect you to do that," and they still don't give you the kudos you deserve because they haven't requested this from anybody else. It's like jump through these six hoops and we're going to put them on fire. Once you do it, it's just like "man, they did it!" But, you're still just not there yet.

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[T]here are some minorities that don't do very good work. That is few. My experience, that is few. That's not a majority. And there are some majority owners that don't do good work also, and that also is few. However, minorities get judged by the last minority. They don't get judged by their own, they get judged by their last minority.

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I ended up working for a university that I used to be facilities project manager, so I used to be one who hired the consultants, and when I started the business, ended up going back and working for them on contracts. I would get recommendations that all my projects came in on time, they were on budget, but then after a while, I'd go to them, they would pick everybody else in the book, and I was like what's going on. Only to find out then there was a double standard, because I had one report that the documents were late. No substantiation that the documents were late. But just that one report, in spite of everything

else, no more calls. These are people I worked for five years before, they knew me personally. So there is a double standard.... Having worked there for five years before, and worked with large firms, very large firms, and actually having to procure them, and we'd sit down at team meetings and that kind of stuff, and say, "My God this firm just keeps screwing it up," but they kept getting the work, kept screwing it up, kept getting the work.... There was no question about them getting the work. So much so that I remember being in an interview process. I was the project manager in charge, I was interviewing the principal of this major firm, with a using department, and while I was trying to hold my technical interview, the principal was kicking back, talking to the client saying, "Are you coming over to my house this weekend to watch the movie on my lawn?" They had that relationship. They had that relationship. It became very clear to me that this principal was ignoring the process, because he already knew he had the job. There is a double standard. At a small company I cannot network enough to get in front of that....

## 2. Exclusion from Industry Networks

Minorities and women recounted their exclusion from the industry networks necessary for success.

The problem that we have in the City of Augusta is first of all, is the good ole boy system, okay? That's how it's operated for almost 100 years.

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The biggest problem, as he stated, is the good ole boy network ... The Klan has not gone away. They put on suits and ties and went into business. What I mean by that is they're writing specs where only a certain group of people can qualify. But if it's a local architect, I agree, it's already written who's going to do the job. You're wasting your time to go down there and get a bid bond and turn something in because the department heads that you were doing this work for already have a relationship who they want to do the job with. The good ole boy system works by the insider giving people information that nobody else has.

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[W]e're not looked upon as a typical business. We're looked upon more or less as somebody that you're a minority, you're pigeon-holed. And until and unless they really know differently... it's hard to develop that relationship, first of all. You have the good ole boy system in place, and you all excuse me for using the term, but I don't know how else to put it. When things come up, they've been doing business with people for so long they automatically think of certain companies.... Well, when they start out from the perspective that so-and-so should do this and maybe they give this company a chance, maybe they give that company a chance, it's still in their minds that they want so-and-so to do this. So they're setting out to make sure almost from the beginning that so-and-so does it.

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[Y]ou were talking about the good ole boy syndrome. There are about three or four [engineering] firms here that receive all the work. That's where we have our problems. That's why this study is really needed.... [T]his study is going to represent and show where the disparity is. When those numbers come in and we see, then it's up to our Commissioners, our policy setters, to open up and say okay, this is how we put language on RFQs, RFPs, so it is eligible for everyone and a level playing field.

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I think that sometimes the majority of times, more work is won between the hours of five and eight than eight and five. I think also many times the procurement people, also the technical people, the people that are going to evaluate you, many times they have a comfort level, and are concerned whether or not the capabilities are there and the resources are there. As well as somebody they've known for 20 some-odd years, 30 some-odd years, and many times they worked for the utility or worked for the community. I think that is an issue, it is.

Even if the exclusion resulted from past racism and sexism, M/WBEs still labored under the effects today.

I think the biggest challenge is ... we don't know what we don't know and not because of being a minority- or a women-owned business. We don't know how things operate and work. So, we may close the door on ourselves without even knowing that the door was open in the first place and being shut out of a situation not so much based on because you're a woman, but based on the fact because you're a woman, you don't know that this is how it's done.

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[Y]ou say, "Well, I don't want to believe that was the reason. Maybe I didn't sign my paperwork properly. Maybe I didn't get this actually done." Because that's the last thing that you want to believe that happened to you when you did all this due diligence to try to get to that point.

Women reported special difficulties in making personal business connections.

Being also in a construction-related industry, a couple things I find are, the technical procurement officers, program managers, project managers, I find are predominantly male. For any sales person and business owner, how do you sell? What's the point of compatibility? I don't play golf. Don't really particularly like football, I don't particularly, and especially the 'Dogs, I'm a Gator! The question is, my area of interest and that kind of stuff, yes I reach out and I do what little bit I know to do, but there is a barrier there in terms of what you do in the 5-9 zone. What's that point of commonality that you can strike up a relationship after hours that then will influence [buyers]. Like I

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said, people do business with people they trust, but they first have to know you. What's the common thing that we talk about? Kids? I don't have any.

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[I] was a divorced mom for three years, and trying to handle business, three kids, juggling job, networking ... building relationships, yes, and the babysitting fees are going through the roof, just because you have to do it. It is part of the requirement to get out there and bring business to the table, and meet people, network, and the business does, guys, it's between 5:30 and 10:00 at night, is sitting and meeting with people, and discussing jobs, and get to know them on a personal basis where it is talking about your likes, your dislikes, your family, people say don't talk politics, well you know, it does come up in conversation sometimes. It does. That's part of building that relationship and bonding and having rapport with people, and you've got to have that to grow a business, and I believe women have to work at it harder, but yet we have to do it on a balance. You've got to keep your distance still, but yet do that bonding and rapport.... Usually there's drinks involved, so you've got to keep yourself professional, you've got to bond and rapport, and know that you can continue that relationship with that person next week or whatever.

One WBE offered that playing golf was one inroad into closed networks.

I use golf as an advantage tool because I do have a client that I can spend 4-5 hours alone with on the golf course, and negotiate business with, and I'm a woman. You don't see that, you don't see that very often. It has been a helpful tool.

### **3. Discrimination by suppliers**

A few M/WBEs questioned whether suppliers quote them higher prices than non-M/WBEs.

But it's something even more insidious. I've worked for a company that sold air conditioners, and you would see several bids come in from local companies, and the same salesperson is doing the processing for all these companies but he's not putting the same marker on the bid. You're watching him go, "Well, why did you give this one 10%, this one 9%, this one 23%?" "Well, this one will never buy from us and this one and this one," but that's not what his job is supposed to be. If he wants to sell that equipment, why is he doing this? So now you step on the outside and you come to that same person and you put that sheet in and you go, "I need your help in getting this equipment," now you don't know what's going to happen. He's looking at the same thing again. Is it your skin color? Is it the money that you've got? Is it how often you come there? You don't know.

### **4. Applying for Commercial Loans**

Many minority owners, especially African-Americans, stated that they found it difficult to obtain working capital. While perhaps not the direct result of discrimination by the lender, that minorities have been excluded from the construction and other industries hampers their access to family wealth and other networks that support growing businesses.



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[T]he key is relationships because we started ours with credit cards, but we got our first line of credit from [bank] without them having our taxes. It was sheerly [sic] based because we used to hang out at the bank and talk to the people there....

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I had to use credit cards. I can't tell you how many times I've had to use my own personal credit cards, and the [banker's] response was, "The people upstairs won't let me do this."

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I'd like to reiterate what she's saying and the gentleman a little earlier about local banks. We've been on a very large job and went to the bank to get some working capital, and the first words out of his mouth were, "What job are you bidding on?" We told him that's part of releasing information. "Oh yeah. [Majority-owned contractor] got that job, too, and we just signed their loan papers." You know, that kind of thing, so that kind of tells you you're already at a disadvantage.... So, immediately you know you can fill out all the paperwork you want, but you're not going to get it because they've already approved someone else for the same project.

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Over the years, we've tried to do work with [bank] and [bank] and stuff, and the whole issue about it is that at the end of the day, they choose not to just because a general said they would be your competitor.

Some M/WBEs reported encountering outright discrimination.

I remember vividly my business partner and I, two women—we're a total women all company, minority—we went and visited our banker. He was a male. He questioned us. We gave him two big notebooks about this thick of all of our company—all our pending contracts, all the contracts we were funding. At the time, we were funding about \$62,000/month in cash on contracts. We just wanted him to give us a line of credit to see if we could do a little bit better, because we were funding \$62,000; we were not getting paid sometimes.... So, I contacted him, met with him. He was the minority assignee for the bank. he had many years of experience. I called him about a month later. I asked him, "How are we doing? Where are we?"... [T]hey would not offer us a straight-up line of credit. They wanted to do what they call contract financing where the contractor pays them and they take out a percentage and then they send you what's left. We were willing to do it because it was a pretty big contract that was pending. So, when we got closer to the notice to proceed date, we called him to ask him what was going on. He was like, "Well you know, I'm working on it." So, a month later, I happened to be downtown close to this bank. I called him and he wasn't in the office. Something just said, "Go to the office."... I ended up walking back to his office, and the two notebooks that I had given him were sitting in the corner on the floor of his office. I picked them up and walked out with them. I never called him back and he never missed them because he never called me

to ask me where they were. So, I'm quite sure that that happens. I have other cases when we first started. Four years ago, I went in and I asked for some money. I wasn't married. I'm recently married. I just got married in August. It was no big deal. I can't even imagine me taking my husband to go get a loan, but just like you said, he asked me and my business partner why we were still single. You know, "There's no men that want jobs? You know, if you all had me in the houses—yes. Well, maybe I could find you all some men." So, how we ended up funding was we had other contracts and we would call our mentors and ask them, "Can you loan us \$20,000 or \$30,000 for six months and we will pay you in this fashion?" just to get the cash injection to get us up to where we needed to be. That seemed to work. Then later, we got a lot of credit from [bank], whom we had banked with since we started the business. But, they didn't think they needed to give us a line of credit until we were five or six years old. Then we got a line of credit through sort of a micro loan program, [bank] out of California. But local banks, not for minority companies. They want to know who you're married to. "Can I help you find a husband?"

### 5. Obtaining Surety Bonds

Minority construction owners particularly stressed the barrier that surety bonding poses to performing as either a prime contractor or a subcontractor. The underwriting standards were so strict that they could not qualify. They saw it as similar to lending discrimination, since the criteria are very similar.

[W]hen you get a bond, you've got to put that money there and it stays there. You can't touch it. That means that you've got to find money to subsidize your payroll for your class and everything else from somewhere else, which puts an extended burden on the company. So, rather than just go broke and you can't do other things, I have to pass that contract up, unless I can find someone else to team with that's willing to do that little part and set me aside like a little child to work with me. That puts us at another burden—I've got to go out and find the big guy and give up something, and most of the time, it puts you at their mercy. You know may lose out and get what you need to grow and develop myself.

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As far as bonding, my experience is don't use anyone in Augusta, Georgia [as] the surety or agent. We've been doing bonding work for quite some time. We tried locally to use an agent. We found out that didn't work because one of our competitors might be there and it falls back to the system and relationships again. But we have found it's a lot better if you, as a minority contractor here in Augusta, we get our insurance out of town. We keep our bonding out of here.... If you can get your banking out of here, you're better off, too.

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It's a combination of all [factors in obtaining bonding]. Being small with limited resources and being a minority because if it didn't matter, why would they ask you your ethnicity on the form?

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I think that if we could come up with here in Augusta an insurance company that would assist in getting the bond, that way they could make money in the City, but with minorities.

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[T]he Small Business Development Association offers a wonderful program called Fast Track, and that program really benefited me in understanding how business operates. So, something like that offered in Augusta is a first step to making sure people can handle it because it's a lot as a business owner.

### **6. Obtaining Work on Public Sector Projects**

#### **a. Prime Contracts**

Most M/WBEs expressed frustration with obtaining public sector prime contracts. This sentiment crossed industries, size of firms, and length of time in business. While all small firms find it more difficult to receive prime contract awards than do large firms, minorities and women felt that their race, ethnicity and gender created additional barriers. Very few had received prime contracts with ARC or other governments.

You asked if it's a matter of race or if it's a matter of economics. When you're small, you don't know the difference. There is no way for you to tell. We can all sit here and say it's economics or we could say it's race. But when you're small and somebody puts that many barriers in front of you, you're going to fall back on what you feel it is because you can't climb that hurdle. You might put yourself down there so somebody else can climb on your back and get over the top, but what they see at the top and what you see at the bottom, you don't know the difference. So how can you say it's race or it's economics when the barriers are so many? What is it? And the City's not going to help you.

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Why do we get the same companies, the same people doing the same work over and over and over again? The same name surfaces, the same name surfaces. It's unbelievable. I've talked to people. I've talked to Commissioners. I've talked about the fairness of what's going on right in our City.

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## Anecdotal Evidence of Disparities in ARC's Marketplace

[I]n order for them to really do some business, they have to have the right mindset and the right attitude about it. Every year [the agency has] a get-together with small businesses, and a lot of times they bring in the chairperson of a department, the assistant chairperson of a department and that kind of thing. I've tried to call these people to make appointments with them to go by and see them to be able to talk with them about doing business. I don't know any other way that you can do business with someone than to do that, and you know, they come to the meetings. They sit down and they talk and they say they're going to do this; they're going to do that. But, if you can't at least get an appointment to go in and see that person and talk to that person about what you have, then how are you going to sell them anything?

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The DBE process was just totally impotent [for minority general contractors] and it didn't work. It was just there in name only. The DBE process didn't bring you to the table. It didn't get you any work. It's through your own efforts and hard work in submitting a proposal to the solicitation and by at the end, the lowest proposal of the ones they received, that afforded you opportunity to get you a contract.

One MBE reported that he had received small services contracts.

[W]e had a good relationship with [ARC], so it's been okay. You know, different things have been slow, but that's with any contract. It will experience ups and downs. But it's been overall a good relationship, one that we're looking forward to keeping, hoping to do more work.

One minority owner provided the following advice to other DBEs:

So as far as racial discrimination goes, I think it's really hard to tell. It's hard to tell the heart of someone else that you're working with or that you might be interviewed by for a particular product that you may have. So, the only way that I've found to bypass that is to develop a trusting relationship with somebody or to be referred by somebody that they trust. That's really the only way that I've been able to get my foot in the door.

### **b. Subcontracts**

M/WBEs reported that while it is easier to obtain subcontracts than prime contracts on public projects because of affirmative action goals, it is still difficult to get work, receive fair treatment, and be paid on time. Many believed that majority prime firms use them only if forced to do so. Few Augusta-based MBE construction firms had received work through the prior DBE program.

I've signed up for everything there is to sign up for. It's like why do all this paperwork because it's wasting my energy and it's frustrating and it's debilitating in a way because mentally, you go there and it's like, "Why waste my time doing this?"... The companies that we got business with were out-of-town companies, so we're not doing business with them. I did establish a relationship with another local company that we've continued to get work from them, but they weren't-- Just because we met them through the program.

## Anecdotal Evidence of Disparities in ARC's Marketplace

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The main thing is, being a small business and a minority, we stress in the firm that you better know what you're doing, and you better do it right.... [Y]ou don't take anything for granted, you go into the situation and you know what's happening, because you can be taken advantage of, as a small business. And people looking at minority, we've had contractors essentially try to strong arm us into saying we don't want to use what you're specifying, and this that and the other, and then we have to fall back and show them how we're right. Sometimes yes, we do have to play hardball with them as well.

Some owners reported that although their firms have been listed on the contract, they were not utilized.

I am a sub, and I did get a job through the DBE old program, and I also got a job through the old program where they didn't-- Once I got awarded the job, I got a percent. I think it was like 1% of the trucking part of the job or the hauling part of the job, and the company did not honor the award.

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[W]e only were able to do ¼ of the work....Everything was going fine, but we can't do the work if there's no cooperation on the staff side. So, there's nothing in place to make sure that things are going to tick and roll along.

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One of the experiences I've had working with a prime in [government agency] is, is we won the job as a local small business, 20%, and then we weren't called. We weren't brought in to the kick-off meeting. I had to write a letter. You first have to find out about it, that you weren't involved, and then I had to write a letter. Then you have to do the dance, because a lot of those contracts are written that you can't go calling the ultimate client. I mean we were in essence told don't call the client, don't call the client. But you've got to do something. You can't be seen as a pushover, I mean it's just bad business. I'm not a certification whore, but the idea is that even throughout the whole project, they never even respected us enough to include us on the communications with the client. We're supposed to be participating in this project; we haven't gotten one thing from the client. Luckily, my office is closer to the client, so he pops in, I don't invite him, but he pops in. So he sees my participation in the project, and he asks when he called, he said did they ever send this? And I said no, he sends it to me. You don't want to be known as just the whistleblower, but at the time how do you begin to as a small business owner gain that respect level? Because you may get on the team through the certifications or whatever, but it's winning the trust of the project manager on the job which becomes a challenge. Working with a team, but you first have to really be a team. Sometimes their culture does not, once they get the job, they're accustomed to doing it all, so they forget that there are other people on the team. Or they never really wanted you on the team in the first place, we checked the box, but it's it until it comes time for you to pay and you have to report, they have to report payment.

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A DBE project management firm owner stated that he is vigilant in policing prime consultants' use of contracted M/WBEs.

[O]ne thing that we have to do ... is hold the general contractor's foot to the fire.... "[Y]ou have to show me every week what this guy is doing. We're managing it for [government agency], but we have to know." And me being a minority, I have a vested interest of course to make sure to see that these people [work], and I say, "Look, this guy was on your team," because they have to submit to us who is going to be on their team, "why isn't he here?" And you have to give certain things to make sure that the guy just wasn't bumped off, because that was a practice.

One MBE engineer questioned whether setting goals on projects that the full service larger prime consultants would do in house was useful.

[O]n our next to last contract we received from Augusta, we were a minority, and we hired a minority out of Atlanta to do the surveying, because we didn't do the surveying, and area photography. If we're going to hire somebody, may as well provide the opportunity, but to call out something you can do yourself for a nickel, for somebody that's going to do it for a dime, it's kind of insane.

Another disagreed.

I could see myself being able to get some of their contacts, and the benefit for them is they do get these bigger projects that do require the DBE participation. I see the hand shaking is they get these big projects, so it's a definite plus that they have to have minority participation, because to me that's their only [incentive].... It's the cash, they can get the project, so that's what they're getting. But for me, I'm getting an opportunity to grow, but technical skills are on me, I have to make sure that I train myself, I do my due diligence and learn what my craft is, that's the benefit of the hand shaking that I see in that relationship.

MBEs in construction were in general agreement that it is easier to obtain work from out of town firms than Augusta-based prime contractors.

Our experience is that we deal with a lot of general contractors outside the City of Augusta. It's been way, way, way better. They have better education, they're not like holding back any prejudice for whatever reason, and they do work better with minority service.

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We got a call from Kentucky, Philadelphia, too. We've gotten calls from all over the place about coming and wanting us to bid with them. We don't get any local calls.

### 7. Obtaining Work on Private Sector or “Non- Goals” Projects

Most MBEs, especially those owned by African-Americans, had not received work through non-goals programs, and the few that have rarely are solicited for private jobs.

But I don't care anything about [majority] guys who here in Augusta are screaming about the outside guys, because we're screaming about the inside guys that are not doing enough for [local MBEs].

I got to do work for him as a private sector job that refused to do work with me because of the paperwork on the [ARC job].

Professional services firms found it especially hard to receive private sector work.

I'm more in the design side of things, and what I'm finding out is that there's less of a culture of participation unless on extremely large projects which mandate goals, 8A goals, disadvantaged goals.... You don't get the participation if the culture of the industry is one that doesn't participate.

In general, M/WBEs stated that a race- and gender-neutral “small business” program would not solve the problems they face.

[W]e just lost our DBE status about two years ago, and we're in the process of trying to get it back with the state. We're an Asian business ... but they kept on contacting us. At first it was, are you still a DBE? And we'd tell them, no we're not, but they kept contacting us, and then essentially word of mouth spread for certain types of jobs where we would get on five or six teams for the job, just because we essentially take that extra step of getting to know the client, but unfortunately we're not golfers and we don't go out for drinks with them, but we do take advantage of every opportunity we have with them to find commonalities.

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What we've learned is that depending who the big company is, some will choose us, select us because of our experience, then there are others that will choose us because they think that we can win the job because of our experience and our associations. We also realize that no majority [engineering] company is interested in adding another player to the participation. That's fact. They feel as though we're taking their business. We feel as though we're here to participate. We just happen to be a minority company, but we're good engineers.

### 8. Conclusion

Consistent with other evidence reported in this Study, anecdotal interview information strongly suggests that M/WBEs continue to suffer discriminatory barriers to full and fair access to ARC and private sector contracts. This evidence includes perceptions of M/WBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans and

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surety bonds; paying higher prices for supplies than non-M/WBEs; inability to obtain public sector prime contracts; difficulties in receiving fair treatment in obtaining public sector subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors or as subcontractors. While not definitive proof that ARC has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of evidence that, especially when considered along side the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether ARC would be a passive participant in a discriminatory marketplace without affirmative interventions.



**C. Tables**

**Table 8.1. Race, Sex and Procurement Category of Mail Survey Respondents**

| <b>Group</b>                                  | <b>Construction</b> | <b>CRS</b> | <b>Services</b> | <b>Commodities</b> | <b>Total</b> |
|---|---------------------|------------|-----------------|--------------------|--------------|
| <b>African American</b>                       | 35                  | 2          | 60              | 14                 | 111          |
| <b>Hispanic</b>                               | 0                   | 2          | 2               | 3                  | 7            |
| <b>Asian</b>                                  | 2                   | 3          | 8               | 6                  | 19           |
| <b>Native American</b>                        | 14                  | 0          | 6               | 5                  | 25           |
| <b>Minorities with Unknown Race/Ethnicity</b> | 30                  | 8          | 42              | 16                 | 96           |
| <b>Non-minority Women</b>                     | 16                  | 5          | 63              | 27                 | 111          |
| <b>Total M/WBE</b>                            | 97                  | 20         | 181             | 71                 | 369          |
| <b>Non-minority Men</b>                       | 162                 | 34         | 184             | 80                 | 460          |
| <b>Total</b>                                  | 259                 | 54         | 365             | 151                | 829          |

Source: NERA ARC mail surveys.

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**Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years**

| <b>Worked or Attempted to Work, Last Five Years</b> | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Total Minority</b> | <b>Non-minority Female</b> | <b>Total M/WBEs</b> | <b>Non-minority Male</b> |
|---|-------------------------|-----------------|--------------|------------------------|-----------------------|----------------------------|---------------------|--------------------------|
| <b>ALL INDUSTRIES</b>                               |                         |                 |              |                        |                       |                            |                     |                          |
| <b>With ARC</b>                                     | 52.3%                   | 28.6%           | 31.6%        | 39.1%                  | 46.9%                 | 37.8%                      | 43.2%               | 52.2%                    |
|   | (111)                   | (7)             | (19)         | (23)                   | (160)                 | (111)                      | (271)               | (458)                    |
| <b>With Other Public Entity in GA or SC</b>         | 49.5%                   | 66.7%           | 36.8%        | 47.8%                  | 48.4%                 | 52.7%                      | 50.2%               | 60.9%                    |
|   | (111)                   | (6)             | (19)         | (23)                   | (159)                 | (110)                      | (269)               | (455)                    |
| <b>With any Public Entity in GA or SC</b>           | 62.2%                   | 66.7%           | 36.8%        | 54.5%                  | 58.2%                 | 54.5%                      | 56.7%               | 64.1%                    |
|   | (111)                   | (6)             | (19)         | (22)                   | (158)                 | (110)                      | (268)               | (457)                    |
| <b>CONSTRUCTION</b>                                 |                         |                 |              |                        |                       |                            |                     |                          |
| <b>With ARC</b>                                     | 60.0%                   | -               | 0.0%         | 30.8%                  | 50.0%                 | 56.3%                      | 51.5%               | 54.9%                    |
|   | (35)                    | (0)             | (2)          | (13)                   | (50)                  | (16)                       | (66)                | (162)                    |
| <b>With Other Public Entity in GA or SC</b>         | 54.3%                   | -               | 0.0%         | 46.2%                  | 50.0%                 | 68.8%                      | 54.5%               | 64.2%                    |
|   | (35)                    | (0)             | (2)          | (13)                   | (50)                  | (16)                       | (66)                | (162)                    |
| <b>With any Public Entity in GA or SC</b>           | 68.6%                   | -               | 0.0%         | 50.0%                  | 61.2%                 | 68.8%                      | 63.1%               | 67.3%                    |
|   | (35)                    | (0)             | (2)          | (12)                   | (49)                  | (16)                       | (65)                | (162)                    |
| <b>CRS</b>  |                         |                 |              |                        |                       |                            |                     |                          |
| <b>With ARC</b>                                     | 50.0%                   | 50.0%           | 100.0%       | -                      | 71.4%                 | 20.0%                      | 50.0%               | 67.6%                    |
|   | (2)                     | (2)             | (3)          | (0)                    | (7)                   | (5)                        | (12)                | (34)                     |
| <b>With Other Public Entity in GA or SC</b>         | 50.0%                   | 50.0%           | 100.0%       | -                      | 71.4%                 | 60.0%                      | 66.7%               | 70.6%                    |
|   | (2)                     | (2)             | (3)          | (0)                    | (7)                   | (5)                        | (12)                | (34)                     |
| <b>With any Public Entity in GA or SC</b>           | 50.0%                   | 50.0%           | 100.0%       | -                      | 71.4%                 | 60.0%                      | 66.7%               | 73.5%                    |
|   | (2)                     | (2)             | (3)          | (0)                    | (7)                   | (5)                        | (12)                | (34)                     |

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years, cont'd**

| <b>Worked or Attempted to Work, Last Five Years</b> | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Total Minority</b> | <b>Non-minority Female</b> | <b>Total M/WBEs</b> | <b>Non-minority Male</b> |
|---|-------------------------|-----------------|--------------|------------------------|-----------------------|----------------------------|---------------------|--------------------------|
| <b>OTHER SERVICES</b>                               |                         |                 |              |                        |                       |                            |                     |                          |
| <b>With ARC</b>                                     | 48.3%                   | 0.0%            | 25.0%        | 33.3%                  | 43.4%                 | 30.2%                      | 37.4%               | 41.3%                    |
|   | (60)                    | (2)             | (8)          | (6)                    | (76)                  | (63)                       | (139)               | (184)                    |
| <b>With Other Public Entity in GA or SC</b>         | 48.3%                   | 100.0%          | 37.5%        | 50.0%                  | 48.7%                 | 46.8%                      | 47.8%               | 52.7%                    |
|   | (60)                    | (2)             | (8)          | (6)                    | (76)                  | (62)                       | (138)               | (182)                    |
| <b>With any Public Entity in GA or SC</b>           | 61.7%                   | 100.0%          | 37.5%        | 50.0%                  | 59.2%                 | 50.0%                      | 55.1%               | 56.3%                    |
|   | (60)                    | (2)             | (8)          | (6)                    | (76)                  | (62)                       | (138)               | (183)                    |
| <b>COMMODITIES</b>                                  |                         |                 |              |                        |                       |                            |                     |                          |
| <b>With ARC</b>                                     | 50.0%                   | 33.3%           | 16.7%        | 75.0%                  | 44.4%                 | 48.1%                      | 46.3%               | 65.4%                    |
|   | (14)                    | (3)             | (6)          | (4)                    | (27)                  | (27)                       | (54)                | (78)                     |
| <b>With Other Public Entity in GA or SC</b>         | 42.9%                   | 50.0%           | 16.7%        | 50.0%                  | 38.5%                 | 55.6%                      | 47.2%               | 68.8%                    |
|   | (14)                    | (2)             | (6)          | (4)                    | (26)                  | (27)                       | (53)                | (77)                     |
| <b>With any Public Entity in GA or SC</b>           | 50.0%                   | 50.0%           | 16.7%        | 75.0%                  | 46.2%                 | 55.6%                      | 50.9%               | 71.8%                    |
|   | (14)                    | (2)             | (6)          | (4)                    | (26)                  | (27)                       | (53)                | (78)                     |

Source: NERA calculations from ARC mail surveys.

Note: Total number of valid responses in parentheses.

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings**

| Business Dealings  | African American     | Hispanic            | Asian                | Native American     | Total Minority        | Non-minority Female  | Total M/WBEs          | Non-minority male |
|--|----------------------|---------------------|----------------------|---------------------|-----------------------|----------------------|-----------------------|-------------------|
| Applying for commercial loans  | <b>47.1%</b><br>(70) | 0.0%<br>(3)         | <b>30.0%</b><br>(10) | 5.9%<br>(17)        | <b>37.0%</b><br>(100) | <b>9.4%</b><br>(64)  | <b>26.2%</b><br>(164) | 3.4%<br>(261)     |
| Applying for surety bonds  | <b>21.8%</b><br>(55) | 0.0%<br>(2)         | 11.1%<br>(9)         | <i>0.0%</i><br>(15) | <b>16.0%</b><br>(81)  | 0.0%<br>(48)         | <b>10.1%</b><br>(129) | 1.7%<br>(231)     |
| Applying for commercial or professional insurance                              | <b>18.2%</b><br>(77) | 0.0%<br>(5)         | 8.3%<br>(12)         | 0.0%<br>(18)        | <b>13.4%</b><br>(112) | 2.7%<br>(75)         | <b>9.1%</b><br>(187)  | 1.3%<br>(302)     |
| Hiring workers from union hiring halls   | <b>14.6%</b><br>(48) | -<br>(0)            | 0.0%<br>(7)          | 0.0%<br>(15)        | <b>10.0%</b><br>(70)  | 0.0%<br>(30)         | <b>7.0%</b><br>(100)  | 0.7%<br>(138)     |
| Obtaining price quotes from suppliers or subcontracts                          | <b>33.3%</b><br>(72) | <b>20.0%</b><br>(5) | <b>27.3%</b><br>(11) | 0.0%<br>(19)        | <b>26.2%</b><br>(107) | 4.7%<br>(64)         | <b>18.1%</b><br>(171) | 1.8%<br>(280)     |
| Working or attempting to obtain work on public-sector prime contracts          | <b>37.9%</b><br>(66) | <b>25.0%</b><br>(4) | 25.0%<br>(8)         | 10.5%<br>(19)       | <b>30.9%</b><br>(97)  | 5.8%<br>(52)         | <b>22.1%</b><br>(149) | 11.6%<br>(242)    |
| Working or attempting to obtain work on public-sector subcontracts             | <b>36.2%</b><br>(69) | 33.3%<br>(3)        | <b>40.0%</b><br>(10) | 11.1%<br>(18)       | <b>32.0%</b><br>(100) | 9.4%<br>(53)         | <b>24.2%</b><br>(153) | 11.2%<br>(250)    |
| Working or attempting to obtain work on private-sector prime contracts         | <b>37.3%</b><br>(67) | 25.0%<br>(4)        | 18.2%<br>(11)        | 5.3%<br>(19)        | <b>28.7%</b><br>(101) | <b>15.3%</b><br>(59) | <b>23.8%</b><br>(160) | 6.2%<br>(259)     |
| Working or attempting to obtain work on private-sector subcontracts            | <b>35.3%</b><br>(68) | 20.0%<br>(5)        | <b>30.0%</b><br>(10) | 5.3%<br>(19)        | <b>28.4%</b><br>(102) | 14.0%<br>(57)        | <b>23.3%</b><br>(159) | 7.2%<br>(263)     |
| Receiving timely payment for work performed                                    | <b>45.2%</b><br>(73) | 20.0%<br>(5)        | <b>36.4%</b><br>(11) | 15.8%<br>(19)       | <b>38.0%</b><br>(108) | 17.7%<br>(79)        | <b>29.4%</b><br>(187) | 16.2%<br>(296)    |
| Functioning without hindrance or harassment on the work site                   | <b>20.0%</b><br>(65) | 0.0%<br>(7)         | <b>33.3%</b><br>(12) | 0.0%<br>(19)        | <b>16.5%</b><br>(103) | 7.5%<br>(67)         | <b>12.9%</b><br>(170) | 4.8%<br>(270)     |
| Joining or dealing with construction trade associations                        | <b>20.0%</b><br>(55) | 0.0%<br>(4)         | 0.0%<br>(8)          | 0.0%<br>(18)        | <b>12.9%</b><br>(85)  | 1.9%<br>(53)         | <b>8.7%</b><br>(138)  | 1.7%<br>(229)     |
| Having to do inappropriate or extra work not required of comparable non-M/WBEs | <b>30.2%</b><br>(63) | 16.7%<br>(6)        | <b>30.0%</b><br>(10) | 5.6%<br>(18)        | <b>24.7%</b><br>(97)  | 7.8%<br>(64)         | <b>18.0%</b><br>(161) | 6.3%<br>(254)     |
| Double standards not required of comparable non-M/WBEs                         | <b>30.2%</b><br>(63) | 20.0%<br>(5)        | <b>33.3%</b><br>(12) | 5.6%<br>(18)        | <b>25.5%</b><br>(98)  | 4.8%<br>(63)         | <b>17.4%</b><br>(161) | 7.5%<br>(267)     |
| In any one of the business dealings listed above                               | <b>58.9%</b><br>(95) | 28.6%<br>(7)        | 46.2%<br>(13)        | 20.0%<br>(20)       | <b>50.4%</b><br>(135) | 29.9%<br>(87)        | <b>42.3%</b><br>(222) | 26.1%<br>(348)    |

Source: See Table 8.2 Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings (Rankings)**

| <b>Business Dealings</b>  | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b> | <b>Native American</b> | <b>Total Minority</b> | <b>Non-minority Female</b> | <b>Total M/WBEs</b> |
|---|-------------------------|-----------------|--------------|------------------------|-----------------------|----------------------------|---------------------|
| <b>Applying for commercial loans</b>  | 5                       | 8               | 12           | 6                      | 8                     | 9                          | 8                   |
| <b>Applying for surety bonds</b>  | 11                      | 13              | 10           | 10                     | 11                    | 12                         | 11                  |
| <b>Applying for commercial or professional insurance</b>                      | 13                      | 12              | 11           | 3                      | 12                    | 13                         | 12                  |
| <b>Hiring workers from union hiring halls</b>                                 | 14                      | 14              | 12           | 12                     | 14                    | 14                         | 14                  |
| <b>Obtaining price quotes from suppliers or subs</b>                          | 9                       | 9               | 9            | 13                     | 10                    | 6                          | 10                  |
| <b>Working or attempting to obtain work on public sector prime contracts</b>  | 2                       | 2               | 1            | 4                      | 2                     | 5                          | 3                   |
| <b>Working or attempting to obtain work on public sector subcontracts</b>     | 1                       | 5               | 4            | 4                      | 3                     | 4                          | 2                   |
| <b>Working or attempting to obtain work on private sector prime contracts</b> | 6                       | 3               | 8            | 9                      | 5                     | 7                          | 4                   |
| <b>Working or attempting to obtain work on private sector subcontracts</b>    | 3                       | 7               | 7            | 7                      | 6                     | 8                          | 6                   |
| <b>Receiving timely payment for work performed</b>                            | 4                       | 1               | 5            | 1                      | 1                     | 1                          | 1                   |
| <b>Functioning without hindrance or harassment on the work site</b>           | 8                       | 10              | 6            | 7                      | 9                     | 2                          | 9                   |
| <b>Joining or dealing with trade associations</b>                             | 12                      | 11              | 12           | 14                     | 13                    | 11                         | 13                  |
| <b>Having to do extra work not required of others</b>                         | 10                      | 6               | 3            | 2                      | 7                     | 3                          | 5                   |
| <b>Having to meet quality or performance standards not required of others</b> | 7                       | 4               | 2            | 11                     | 4                     | 10                         | 7                   |

Source: See Table 8.2.

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.5. Prevalence of Disparate Treatment Facing M/WBEs**

|   | (1)             | (2)             | (3)             | (4)             | (5)                | (6)                |
|---|-----------------|-----------------|-----------------|-----------------|--------------------|--------------------|
| M/WBE                                     | 0.116<br>(3.11) | 0.109<br>(2.58) |                 |                 |                    |                    |
| Minority                                  |                 |                 | 0.145<br>(3.46) | 0.143<br>(3.00) |                    |                    |
| Non-minority Female                       |                 |                 | 0.053<br>(0.91) | 0.042<br>(0.68) | 0.057<br>(0.98)    | 0.052<br>(0.85)    |
| African-American                          |                 |                 |                 |                 | 0.339<br>(5.93)    | 0.363<br>(5.52)    |
| Hispanic                                  |                 |                 |                 |                 | 0.030<br>(0.17)    | 0.096<br>(0.51)    |
| Asian/Pacific Islanders                   |                 |                 |                 |                 | 0.204<br>(1.48)    | 0.208<br>(1.42)    |
| Native American                           |                 |                 |                 |                 | (0.073)<br>(-0.67) | (0.059)<br>(-0.49) |
| Owner's Education (3 indicator variables) | No              | Yes             | No              | Yes             | No                 | Yes                |
| Firm Age (4 indicators)                   | No              | Yes             | No              | Yes             | No                 | Yes                |
| Employment size bracket (6 indicators)    | No              | Yes             | No              | Yes             | No                 | Yes                |
| Sales/revenue size bracket (4 indicators) | No              | Yes             | No              | Yes             | No                 | Yes                |
| Industry category (3 indicators)          | Yes             | Yes             | Yes             | Yes             | Yes                | Yes                |
| N   | 636.00          | 607.00          | 636.00          | 607.00          | 636.00             | 607.00             |
| Pseudo R <sup>2</sup>                     | 0.01            | 0.04            | 0.02            | 0.05            | 0.06               | 0.09               |
| Chi <sup>2</sup>                          | 11.65           | 33.91           | 13.93           | 36.41           | 45.87              | 66.48              |
| Log likelihood                            | (388.59)        | (362.62)        | (387.45)        | (361.36)        | (371.48)           | (346.33)           |

Source: See Table 8.2.

Note: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. T-statistics of 2.58 (1.96) (1.64) or larger indicate that the result is significant within a 99 (95) (90) percent confidence interval.

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing**

| <b>Business Dealings</b>  | <b>African-American</b> | <b>Hispanic</b> | <b>Asian</b>    | <b>Native American</b> | <b>Total Minority</b> | <b>Non-minority Female</b> | <b>Total M/WBEs</b> |
|---|-------------------------|-----------------|-----------------|------------------------|-----------------------|----------------------------|---------------------|
| <b>Applying for commercial loans</b>  | 41.1%<br>(6.22)         | 0.0%<br>(0.00)  | 20.1%<br>(1.82) | 0.2%<br>(0.04)         | 17.2%<br>(4.51)       | 4.7%<br>(1.06)             | 11.5%<br>(3.85)     |
| <b>Applying for surety bonds</b>  | 14.1%<br>(4.03)         | 0.0%<br>(0.00)  | 8.9%<br>(1.43)  | 0.0%<br>(0.00)         | 5.3%<br>(3.05)        | 0.0%<br>(0.00)             | 3.3%<br>(2.35)      |
| <b>Applying for commercial or professional insurance</b>  | 17.6%<br>(3.86)         | 0.0%<br>(0.00)  | 2.5%<br>(0.45)  | 0.0%<br>(0.00)         | 7.8%<br>(2.98)        | 0.9%<br>(0.29)             | 5.3%<br>(2.53)      |
| <b>Hiring workers from union hiring halls</b>   | 4.3%<br>(2.37)          | 0.0%<br>(0.00)  | 0.0%<br>(0.00)  | 0.0%<br>(0.00)         | 0.7%<br>(1.79)        | 0.0%<br>(0.00)             | 0.6%<br>(1.43)      |
| <b>Obtaining price quotes from suppliers or subcontracts</b>  | 28.1%<br>(5.35)         | 26.5%<br>(1.93) | 26.0%<br>(2.63) | 0.0%<br>(0.00)         | 12.3%<br>(4.50)       | 2.8%<br>(0.89)             | 8.4%<br>(4.00)      |
| <b>Working or attempting to obtain work on public sector prime contracts</b>                              | 27.7%<br>(4.02)         | 5.4%<br>(0.34)  | 6.9%<br>(0.51)  | 0.2%<br>(0.02)         | 12.6%<br>(2.87)       | -7.9%<br>(-1.43)           | 7.1%<br>(1.81)      |
| <b>Working or attempting to obtain work on public sector subcontracts</b>                                 | 22.2%<br>(3.57)         | 20.0%<br>(0.97) | 15.3%<br>(1.19) | -3.7%<br>(-0.44)       | 11.6%<br>(2.76)       | -4.1%<br>(-0.77)           | 7.3%<br>(1.96)      |
| <b>Working or attempting to obtain work on private sector prime contract</b>                              | 24.5%<br>(4.27)         | 37.6%<br>(1.70) | 9.5%<br>(0.82)  | -5.3%<br>(-0.72)       | 14.0%<br>(3.63)       | 8.4%<br>(1.60)             | 11.0%<br>(3.44)     |
| <b>Working or attempting to obtain work on private sector subcontracts</b>                                | 22.3%<br>(4.06)         | 34.8%<br>(1.71) | 24.5%<br>(1.85) | -6.1%<br>(-1.01)       | 12.1%<br>(3.34)       | 6.7%<br>(1.31)             | 9.6%<br>(3.15)      |
| <b>Receiving timely payment for work performed</b>  | 30.7%<br>(4.51)         | 16.7%<br>(0.79) | 23.1%<br>(1.57) | -2.1%<br>(-0.21)       | 11.8%<br>(2.60)       | 3.3%<br>(0.59)             | 8.6%<br>(2.20)      |
| <b>Functioning without hindrance or harassment on the work site</b>                                       | 8.6%<br>(2.31)          | 0.0%<br>(0.00)  | 28.3%<br>(2.61) | 0.0%<br>(0.00)         | 4.5%<br>(1.90)        | 2.4%<br>(0.78)             | 3.5%<br>(1.76)      |
| <b>Joining or dealing with construction trade associations</b>  | 21.9%<br>(2.82)         | 0.0%<br>(0.00)  | 0.0%<br>(0.00)  | 0.0%<br>(0.00)         | 9.3%<br>(2.24)        | -1.4%<br>(-0.32)           | 6.4%<br>(1.79)      |
| <b>Having to do inappropriate or extra work not required of comparable non-M/WBEs</b>                     | 19.7%<br>(3.65)         | 27.9%<br>(1.66) | 28.7%<br>(2.07) | -2.4%<br>(-0.35)       | 7.7%<br>(2.36)        | 1.1%<br>(0.26)             | 5.4%<br>(1.93)      |
| <b>Having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs</b> | 26.6%<br>(4.43)         | 30.2%<br>(1.72) | 34.1%<br>(2.71) | 2.0%<br>(0.26)         | 11.7%<br>(3.36)       | -0.7%<br>(-0.16)           | 7.5%<br>(2.60)      |
| <b>In any one of the business dealings listed above</b>   | 36.3%<br>(5.52)         | 9.6%<br>(0.51)  | 20.8%<br>(1.42) | -5.9%<br>(-0.49)       | 14.3%<br>(3.00)       | 4.2%<br>(0.68)             | 10.9%<br>(2.58)     |

Source: See Table 8.2.

Note: Reported estimates are derivatives from Probit models with specification such as in Table 8.5, columns (2). T-statistics are in parentheses. T-statistics of 1.96 (1.64) or larger indicate that the result is significant within a 95 (90) percent confidence interval.

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**Table 8.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Sample Differences**

| Business Environment                         | African-American            | Hispanic     | Asian                      | Native American            | Total Minority              | Non-minority Female         | Total M/WBEs                 | Non-M/WBEs     |
|--|-----------------------------|--------------|----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|----------------|
| <b>Bonding Requirements</b>                  | <b>38.6%</b><br><b>(57)</b> | 0.0%<br>(1)  | <b>66.7%</b><br><b>(6)</b> | 0.0%<br>(12)               | <b>34.2%</b><br><b>(76)</b> | <b>20.0%</b><br><b>(40)</b> | <b>29.3%</b><br><b>(116)</b> | 16.7%<br>(227) |
| <b>Insurance Requirements</b>                | <b>18.6%</b><br><b>(70)</b> | 0.0%<br>(2)  | <b>22.2%</b><br><b>(9)</b> | 0.0%<br>(15)               | 15.6%<br>(96)               | 10.2%<br>(59)               | <b>13.5%</b><br><b>(155)</b> | 8.0%<br>(300)  |
| <b>Previous Experience Requirements</b>      | <b>16.9%</b><br><b>(71)</b> | 0.0%<br>(3)  | 0.0%<br>(9)                | 0.0%<br>(15)               | <b>12.2%</b><br><b>(98)</b> | 0.0%<br>(61)                | 7.5%<br>(159)                | 4.2%<br>(311)  |
| <b>Cost of Bidding or Proposing</b>          | <b>32.3%</b><br><b>(65)</b> | 25.0%<br>(4) | 12.5%<br>(8)               | 5.9%<br>(17)               | 25.5%<br>(94)               | 13.2%<br>(53)               | 21.1%<br>(147)               | 18.1%<br>(288) |
| <b>Large Project Sizes</b>                   | <b>40.0%</b><br><b>(60)</b> | 25.0%<br>(4) | 37.5%<br>(8)               | 20.0%<br>(15)              | <b>35.6%</b><br><b>(87)</b> | 31.4%<br>(51)               | <b>34.1%</b><br><b>(138)</b> | 21.5%<br>(270) |
| <b>Price of Supplies or Materials</b>        | <b>9.5%</b><br><b>(63)</b>  | 33.3%<br>(3) | 11.1%<br>(9)               | 6.3%<br>(16)               | <b>9.9%</b><br><b>(91)</b>  | <b>29.8%</b><br><b>(57)</b> | 17.6%<br>(148)               | 19.6%<br>(285) |
| <b>Obtaining Working Capital</b>             | <b>55.4%</b><br><b>(65)</b> | 50.0%<br>(2) | 22.2%<br>(9)               | 18.8%<br>(16)              | <b>45.7%</b><br><b>(92)</b> | 26.5%<br>(49)               | <b>39.0%</b><br><b>(141)</b> | 18.6%<br>(269) |
| <b>Late Notice of Bid/Proposal Deadlines</b> | 38.6%<br>(57)               | 25.0%<br>(4) | 55.6%<br>(9)               | <b>7.1%</b><br><b>(14)</b> | 34.5%<br>(84)               | 32.7%<br>(52)               | 33.8%<br>(136)               | 33.6%<br>(256) |
| <b>Prior Dealings with Owner</b>             | <b>16.7%</b><br><b>(66)</b> | 0.0%<br>(4)  | 11.1%<br>(9)               | 0.0%<br>(16)               | <b>12.6%</b><br><b>(95)</b> | 7.4%<br>(54)                | <b>10.7%</b><br><b>(149)</b> | 3.9%<br>(304)  |

Source: See Table 8.2.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in **boldface italicized** type are significant within a 90% confidence interval.



**Table 8.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results**

| Business Environment                  | M/WBEs         |
|---------------------------------------|----------------|
| Bonding Requirements                  | + <sup>†</sup> |
| Insurance Requirements                | +              |
| Previous Experience Requirements      | +              |
| Cost of Bidding or Proposing          | —              |
| Large Project Sizes                   | +              |
| Price of Supplies or Materials        | —              |
| Obtaining Working Capital             | +              |
| Late Notice of Bid/Proposal Deadlines | +              |
| Prior Dealings with Owner             | + <sup>*</sup> |

Source: See Table 8.2.

Note: A plus (+) indicates that a group is more likely than non-M/WBEs to report difficulty with business environment factors. A minus (—) indicates that a group is less likely than non-M/WBEs to experience difficulty. An asterisk (\*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

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**Table 8.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never *Hire* Them on Projects without Such Goals**

| M/WBE Group                | All Industries | Construction | CRS    | Services | Commodities |
|----------------------------|----------------|--------------|--------|----------|-------------|
| <b>African American</b>    | 73.3%          | 78.6%        | 100.0% | 65.8%    | 87.5%       |
|                            | (75)           | (28)         | (1)    | (38)     | (8)         |
| <b>Hispanic</b>            | 83.3%          | -            | 100.0% | 100.0%   | 66.7%       |
|                            | (6)            | (0)          | (2)    | (1)      | (3)         |
| <b>Asian</b>               | 75.0%          | 100.0%       | 33.3%  | 75.0%    | 100.0%      |
|                            | (12)           | (1)          | (3)    | (4)      | (4)         |
| <b>Native American</b>     | 86.7%          | 88.9%        | -      | 100.0%   | 66.7%       |
|                            | (15)           | (9)          | (0)    | (3)      | (3)         |
| <b>Total Minority</b>      | 52.6%          | 53.1%        | 38.5%  | 51.4%    | 62.5%       |
|                            | (173)          | (64)         | (13)   | (72)     | (24)        |
| <b>Non-minority Female</b> | 58.6%          | 50.0%        | 75.0%  | 62.5%    | 50.0%       |
|                            | (58)           | (12)         | (4)    | (32)     | (10)        |
| <b>Total M/WBE</b>         | 54.1%          | 52.6%        | 47.1%  | 54.8%    | 58.8%       |
|                            | (231)          | (76)         | (17)   | (104)    | (34)        |

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.

## Anecdotal Evidence of Disparities in ARC's Marketplace

**Table 8.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never *Solicit* Them on Projects without Such Goals**

| M/WBE Group                | All Industries | Construction  | CRS           | Services       | Commodities   |
|----------------------------|----------------|---------------|---------------|----------------|---------------|
| <b>African American</b>    | 67.1%<br>(73)  | 67.9%<br>(28) | 100.0%<br>(1) | 61.1%<br>(36)  | 87.5%<br>(8)  |
| <b>Hispanic</b>            | 80.0%<br>(5)   | -<br>(0)      | 100.0%<br>(2) | 0.0%<br>(1)    | 100.0%<br>(2) |
| <b>Asian</b>               | 75.0%<br>(12)  | 50.0%<br>(2)  | 100.0%<br>(3) | 50.0%<br>(4)   | 100.0%<br>(3) |
| <b>Native American</b>     | 84.6%<br>(13)  | 87.5%<br>(8)  | -<br>(0)      | 100.0%<br>(3)  | 50.0%<br>(2)  |
| <b>Total Minority</b>      | 49.4%<br>(168) | 48.4%<br>(64) | 53.8%<br>(13) | 45.7%<br>(70)  | 61.9%<br>(21) |
| <b>Non-minority Female</b> | 59.3%<br>(54)  | 50.0%<br>(10) | 60.0%<br>(5)  | 63.3%<br>(30)  | 55.6%<br>(9)  |
| <b>Total M/WBE</b>         | 51.8%<br>(222) | 48.6%<br>(74) | 55.6%<br>(18) | 51.0%<br>(100) | 60.0%<br>(30) |

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.



## **IX. ARC's Targeted Contracting and Procurement Policies and Procedures**

In this Chapter, we review ARC's Local Small Business Opportunities Program, followed by a summary of business owner experiences with these policies and procedures, as well as with ARC's prior DBE program and other government affirmative action contracting programs.

### **A. ARC's Local Small Business Enterprise Program**

In March 2008, ARC adopted the Local Small Business Opportunities Program ("LSBOP").<sup>217</sup> This program replaced the prior race- and gender-conscious Disadvantaged Business Enterprise Program, which was enjoined by the federal district court in March 2007.<sup>218</sup> The LSBOP was established to promote opportunities for Local Small Businesses ("LSBs") in ARC's contracting and procurement activities. Contractors are required to utilize LSBs to perform commercially useful functions to the maximum feasible extent as partners and subcontractors. This Program is in addition to the Local Preference Ordinance,<sup>219</sup> and is fully race- and gender-neutral.

To be eligible for certification as a LSB, a firm must:

- Have its principal office and place of doing business in Augusta-Richmond County;
- Have annual, gross receipts less than \$500,000, averaged over three years;
- Be owned by persons whose personal net worth is less than \$750,000. Personal net worth does not include the individual's ownership interest in his or her primary residence, and does include his or her share of assets held jointly with a spouse;
- Posses a valid ARC business license for six months prior to applying for certification; and
- Be owned for at least one year by the individual relied upon for certification.

A firm will graduate from the Program after 10 years unless a good cause is shown to the Commission.

The DBE Coordinator has primary responsibility to administer the LSBOP. This includes:

- Certifying LSBs;
- Conducting education and outreach efforts;

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<sup>217</sup> ARC Code, § 1-10-58 *et seq.*

<sup>218</sup> *Thompson Building Wrecking Co., Inc. v. City of Augusta, Georgia*, 2007 U.S. Dist. Lexis 27127 (S.D. Ga. 2007).

<sup>219</sup> ARC Code, § 1-10-6.

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- Reviewing bid and proposal documents;
- Establishing and maintaining a directory of LSBs and providing the Directory to potential prime contractors;
- Developing annual forecasts based on anticipated purchases and the availability of certified LSBs;
- Providing training to ARC departments on the Program;
- Providing technical assistance and other services to facilitate LSB participation;
- Identifying LSBs for individual projects;
- Assisting prime contractors in identifying and contacting LSBs;
- Evaluating a bidder's/proposer's good faith efforts;
- Tracking LSB utilization by departments and providing feedback to Department heads on the use of LSBs for small purchases; and
- Preparing an annual LSBOP report to the Commission.

The Procurement Department also has specific responsibilities. These include:

- Including information on the LSBOP to registered vendors;
- Soliciting LSBs for written bids or quotations;
- Working with project managers or user agencies to “unbundle” projects;
- Supporting outreach to LSBs;
- Developing contract specifications that are open and competitive and do not contain unnecessary impediments to LSB participation;
- Including LSBs on bid/quote invitation lists;
- Ensuring that all bids or proposals from the Procurement Department adhere to the Program;
- Tracking LSB purchases;
- Making special provision for progress payments to LSBs, in consultation with the DBE Coordinator, the Using Agency and the Finance Director; and

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- Confirming the contract terms where a LSB prime contractor is negotiating a line of credit.

A bidders/proposer who proposed to subcontract any portion of the work is required to make good faith efforts, as defined in the ordinance, to fulfill the solicitation's request for LSB participation. The successful awardee is required to submit Monthly Utilization Reports of its utilization on LSBs.

Departments are authorized to make small purchases, as defined in the ARC Code, from LSBs whenever possible and appropriate. The Procurement Director and all department directors are responsible for evaluating Program compliance and will review all aspects of the Program's operations to assure that the purpose is being attained; they will report to the DBE Coordinator for tracking and annual report purposes.

The DBE Coordinator, with the assistance of the Department of Information Technology, shall compile quarterly information on LSB participation from all user departments. Information shall be aggregated into the broad industry categories of construction, professional services, general services and materials/equipment/supplies. Reports to the Commission shall provide for the value of purchases and LSBs' participation therein.

The ordinance creates the Citizen's Small Business Advisory Board, to advise the Commission and the DBE Coordinator on the Program. Members are appointed by the Mayor, Commission and the Richmond County Legislative Delegation to the Georgia General Assembly.

The ARC Commission will evaluate the Program on an annual basis. Factors may include:

- Number of firms certified;
- Training of and technical assistance to LSBs;
- Dissemination of Program information; and
- The effectiveness of the Program.

### **B. Business Owner Interviews**

To gather anecdotal evidence of the effectiveness of current and past ARC policies and procedures in opening up opportunities for all firms, including M/WBEs, we interviewed 114 firms. We also explored owners' experiences with other race- and gender-conscious contracting programs, as a guide to ARC for future initiatives.

The following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed over the many sessions by many participants.

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Numerous interviewees, M/WBE s and non-M/WBEs alike, provided feedback on ARC's race- and gender-neutral procedures operated. Many suggested concrete improvements.

### a. Contract specifications

Numerous owners described what they experienced as overly restrictive contract specifications.

\*\*\*

[T]hey specified a [supplier] that only the big boys in Augusta, Georgia can get that [product]. In other words, if you get solicited the bid, you can't really submit a bid because the big boys have the exclusive on that [product] and they refuse to sell to anybody else in Augusta. So, we can't actually bid.... It is a serious matter.

\*\*\*

[T]here was a contract that we did not bid that I think was due this week, and we met all of the qualifications, including the local qualifications. But, there was one requirement. I believe the requirement was stated you must have had [very specialized] experience in ARC of Augusta.... There are only two [firms] that would have experience in something like that.... We didn't bid it, and this happens a lot with Augusta where they only give one bid for a job because people decide to not bid it because of how it is written.

Qualifications for professional services contracts are sometimes so stringent that local firms do not submit proposals. Out of town firms are awarded projects but then fail to build local capacity.

In the spirit of competition it knocks out the local people because they cannot show on the technical side that they have a team that's worked together on so many projects for so many years.

\*\*\*

[Q]ualifications are so involved it's almost like it's already written for somebody, or like you said, they've already got their best buddies but they have to do this because it's over X number of dollars so they have to put it out to bid.... [T]he qualifications are too steep and I don't fall into them, or I can't do the whole thing.

Others complained that specifications were too vague.

[In] the RFP process, a lot of the times the description of the project is so vague and general, it's almost inevitable that you're going to get a change order.... If nothing else came out of this, I'd like more detailed project descriptions, so that everybody is playing on more of a level playing field.



### b. Access to information

Smaller and new firms found it difficult to access information on upcoming opportunities or to contact the appropriate ARC personnel.

You hit too many closed doors and anybody that you talk to doesn't want to give you any pertinent information on where to go next. So you hang up either as confused or more confused than you were when you called.

\*\*\*\*

I find that difficult to do, to get your foot in the door and the opportunity to bid.

\*\*\*

The website pretty much tells you that they're doing something, not "Here's an opportunity to do something"... and it's already a done deal by then.

\*\*\*

Other places are more open in terms of what's available and what you can do. I do business with the government [agency], several counties over in South Carolina. I just find it just a lot easier to get the information and to deal with people.

\*\*\*

I'm hearing the same thing from these [M/WBE] folks here that I [a non-M/WBE] experience out here in the marketplace: that they're used to certain ones, they are married to these people, and that's the way it goes.

\*\*\*

Just other areas just seem to be more open.

\*\*\*

We never get an email, anything about what's going on.

\*\*\*

[After submitting a bid on a large contract,] we [found out we] were not qualified to bid on the contract for the Board of Health. So our frustration was well, why didn't somebody make us aware of the qualifications for the bidders up front?... just about six months or so ago we were contacted again by the Department of Health, the same person I had worked with previously, and we were invited to bid again. It was at that time that I informed her that, "Gee, you know we found out we're not eligible to bid on this contract, so we really can't." So it seems like the people who were the interface, the

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liaison with the contractors weren't aware of what the requirements were?... All we received was a statement of work. It listed all the things that needed to be done, but there was no information as to the qualifications for bidders.

Several owners expressed dissatisfaction with ARC's use of an outside vendor to provide solicitation information.

When you go to Augusta's website, if you look under bid opportunities, and they have a little icon over to the left, you can see all the listed bids. They used to list them themselves. I actually think it was better when they listed them themselves, but now they go through a third party agency called Demand Star. You can list them. You can download them. I think they charge you a dollar if you download them, \$3 if you want them mailed to you.... there is [a catch]. If you don't respond and say that you're bidding or you're not ... if you need to download it again, you can't get it again without paying another \$3.

\*\*\*

This is the first time that I've ever downloaded something that I've had to first pay for a download. If I want it mailed, I understand that I had to pay \$3 through PayPal or something and then it kicked me into this other company. They told me they were going to be contacting me, and she did call and I pretty much told her that I wasn't thinking about a subscription-based type of thing like that.... I was not happy with having to pay \$3 and then having this third party contacting me to sell me something.

Several participants mentioned that ARC did not inform them of the outcome of their bids or proposals.

[W]e have bid on contracts and have not heard back that we were not selected.... That is one thing that you don't get from Augusta. Usually you have to call and see what happened. We have submitted on other contracts that we ... still don't know to today what has happened to them, or if they were awarded.

\*\*\*

It just seems that the evaluation period seems to take an awfully long time, longer than most cities.... We have state contracts as well, and usually they give you a timetable and say that the evaluation period ends on so-and-so date, and they usually honor that. But usually with the Richmond County proposals, they don't have like a schedule of when the evaluation—at least I don't recall one. I remember there was one for one that I bid, and it was actually on the IT side. But they did not make it, and then it was like three or four months and it was still under evaluation. So, it seems to take a long time for what I think is straightforward qualifications.

\*\*\*

[I]f you don't get it, you sometimes don't find out right away why that is.

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Several suggested that more efforts to utilize local engineering firms, in addition to the LSBOP, are needed.

On the consultant side, I think it would be in Augusta-Richmond County's best interests to hire three, five, eight on-call consultants for a period of two-five years, and then whenever they have a project up they contact them—and this is similar to many places, Athens does it, plenty of other places do it. But right now Richmond County puts out a project, and lately you'll have 40 or 50 people interested, and more than likely, they're going to get a low fee, more than likely it's going to be from an unqualified firm, but how do you really know? More than likely they're going to go with the low fee, and get a less desirable product, it is not going to be a quality product. And on a lot of occasions, they've hired some out of town consultants

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[ARC] could set up a preapproved rotation list with agreed rates or, they have three on-calls, they know we're all qualified, and then they make us compete. But at least then I know I'm competing against somebody of equal quality, somebody who is going to produce the same product I'm planning on producing, and not some guy who's running a one-man shop, who is going to low-ball the product.

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[Y]ou're going to have a local firm that's worked with the County before, that knows what the County wants, knows how to get them a good product, and [non-local firms are] not willing to do that. Because a local firm has to live here, we have to live with the people we're doing the work for. We don't want to go back and ask for a change order a day into the project, but there may be some other firms, that just come out here, they may go as low as they can on the bid, and as soon as they get it just change-order their way through it, and say hey, we make them mad, we just won't get another project from them.

Overwhelming bidding paperwork was a barrier for minority and women prime contractors as well as large majority firms.

Reduce the paperwork burden of submitting bids. For example, do not require a signed contract with the bid; reduce the number of copies required (perhaps charge a fee for copying); permit a short window after bid opening to submit all subcontractor forms, including those for M/WBE compliance.

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Set up a web-based vendor and subcontractor registration and opportunity notification system.

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[E]very two, every three months, the bidding process changes, meaning a new document may be in the form or a new this, new that. There's a sense that the bureaucracy is just overwhelming and it's just become very, very difficult to even communicate with the City of Augusta when dealing with bidding procedures specifically. Case in point—I brought this up at a pre-bid meeting not too long ago. In order to submit a bid to the City of Augusta, they require generally a very extensive bid form, and they require that you submit six copies of that bid form. The problem with that ... is that in the bid process now with the technology the way it is, the numbers are very dynamic up to the last minute of the bid. You know, a \$2 million job, the number may drop \$100,000 in the last five minutes, and those subs are getting to us and those subs are getting bids from suppliers. So, the numbers are coming down right just in the last few minutes. And if we've got a bid courier at the bid location that has to fill out not one but six copies of the bid form, you can't do it. You basically have to shut off all the numbers 20 minutes ahead of time so the numbers are going down. But we just can't respond to the paperwork. I asked that question, and I told them I'd be glad to put in \$2 in a bid envelope and one copy and if you need six copies, I'll pay for the copy; just run it afterwards. The response I got was, "Well, that's the way it's written. That's just the way we've got to do it." I've spoken with [procurement staff] a couple of times, and when [the person] calls you back, I get the impression there are two lawyers in the room because it's that kind of a "We're protecting ourselves." It seems to have grown over time. I think as the City of Augusta has had some ... issues with the media, and everybody knows about the news in that regard. The bureaucracy has become very constrictive.... [O]ne of the things you have to do is, well, in order to qualify for a bid is turn in about 14 different forms. If I was a minority-owned business and I was trying to start a business, this stuff would just scare me to death. So I don't think they make it easy. I think they need to work to try to make it a little bit easier.... [G]ive us 24 hours to submit all that documentation after the bid time. Try to get all that pulled together along with six copies is just-- It's not impossible; it can be done, but it's just total chaos trying to get it done. You've got to cut your numbers off at 20 minutes till. Part of the issue is typically they have 8, 10, 12 alternates that go with that as well.... [E]ven their prequalification process, they require at least 14 documents to be submitted at bid time.

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[S]implify the bid form. There's a lot of information they ask for on bid day that can be submitted afterwards.

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We have a limited time to get our packages together. Most of our subcontractors don't give us prices until 30 minutes before the job. That's when the majority of our prices and the majority of our good prices come in. We've got all these forms that you have to have from your subcontractor, we just can't get it all together in time, and we turn it into the city and we're not compliant.... There's probably not a general contractor in Augusta who hasn't been found non-compliant.... Usually they go to the next guy. Chances are the next guy is usually not compliant either. It's not just so much with the DBE and all that

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kind of stuff. It's the affidavits and such. Richmond County is the hardest one to deal with.... There's no consistency.

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[ARC should] not require signed contracts with a bid, do not require 6 copies of the bid... allow you a window after bid opening to get all your subcontractor forms together.

There was a general consensus that more procurement staff, more professional procurement staff, more outreach, more access to information, and more transparency are needed.

Review the entire procurement process. Simplify and streamline the payment process.

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There's nobody really to help you to answer questions.... And then you go to ask about it, and nobody down there knows, they just say, "Well, you've just got to read it."

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The overall point is just the inability to communicate effectively with the people down there, and that theme seems to be reoccurring in this discussion. I think it's a systemic issue with the management in general. It almost leads me to believe that there is some hyper micro-management going on. People seem unwilling to-- Case in point, when I asked the question why six bid forms, "Well, that's the way it's written; that's the way it is," and that's typical of the kind of response you get when you ask presumably intelligent questions. I'm wondering if people need to be freed up to do their jobs. I think that's probably the same issue with the shepherding pay requests through the system. I'm wondering if somebody's-- the way I understand the politics, I understand this opportunity and that they're responsible to the taxpayers. You want your contractor focused on numbers and not on all the other irrelevant stuff that goes along with it. As a Richmond County taxpayer, I want these people paying attention trying to get the lowest and best price and not dealing with all this crap. It seems to me, like I say, a systemic management issue that needs to be dealt with.

One recommendation was to open up the process through holding more vendor outreach fairs.

[The] City could benefit from having monthly RFP events, and you say, "Okay, for the next six months, these are the jobs we have coming. Meet and greet all the rest of the vendors," and then that way you're winning because then the community gets to know each other. It's not costing anybody anything because it happens on City grounds, and then you get better acclimated to understand what's coming down the pipeline. So, if there is a bundle packet, you might handle the graphing and I might handle this. So, we met six months before this bid even comes out, and then we've got the opportunity to subcontract.

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[Create] some type of regular way for the consulting community to talk to the City. Set up a construction industry quarterly roundtable to discuss issues and provide recommendations.

### c. Payment

Professional services firms generally reported reasonably timely payment.

Augusta has been very good at processing our invoices within what is stated in our contract,... We're working on four days with them typically.... We pick up the check on Friday, so our subs obviously get paid quick. Everybody may not have that good of a success.... But we just make sure we sit down with them and say, "How do you want your invoice? Let's talk about exactly what you want it to look like, so you can approve it."

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I don't know that that's the problem Augusta has, paying, in our experience.

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We've had a few that seem to have gotten lost in the cracks and took forever to finally straighten out. But generally, both through utilities and through the engineering department they've been pretty responsive.

This stood in stark contrast to the experiences of construction contractors.

[From the time you submit your pay application until you get the check] can take four or five months. That's with us calling after 30 days and constant, "What is the holdup? What's the deal?"... We can't afford to sit out there and wait for a four, five, six months wait till now to figure out that their people were wrong in the field or they had the wrong PO or you know.... [They ask you for the same information] over and over.

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Payment, it depends on the departments. Some do pay faster than others. Some are 90 days out, others 30 days you got your money. It depends on what hands you go through. None of it seems to go through the same hands.

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[I]f it's over a certain amount, usually \$30,000, it has to be petitioned to be approved. Sometimes what happens is there's a chain of events, and a number of links in the chain break down. When the Commission has to approve it, then the approval letter has to be sent from the administrator's office to whoever submitted the requisition for funds, and then that person has to get the approval of the project administrator, and that person has to submit the paperwork to a different County department. Then they have to approve it

and then it goes back to the Purchasing Department. So there are a number of stages. Somebody's not shepherding that and sort of making sure that all these people who are links in the chain do their job in a timely fashion. It's hard to say where it breaks down.

### **2. ARC's Small Local Business Opportunities Program**

Very few firms had experience with the new LSBOP. For those who had, some M/WBEs reported that they received less business from the new program than under the prior DBE program.

With the old [race- and gender-based program], we got a bunch of calls all the time, every time a procurement opportunity came out. With the new system, the calls stopped because the majorities recognized the game.... [In the] last two years, we kind of just got away from [the DBE Program] because we've been able to sustain our own, but for about ten years straight, that was the only way we could get to the dance.

In addition, the government has to have an overall commitment to the Program.

So begin to build the capacity that the local firms need, so that [ARC] doesn't have to go to the same folks all the time, the same ones who yes, they have the capacity because they're getting all the work. How do you begin to push that money further and further down the system? The second problem is on the technical side. You may have a local small business program, and the procurement people say that and all this kind of stuff. But if department heads do not embrace that system because they're writing the technical parts of the proposal, when you show up at the pre-proposal conferences, and the department heads are surprised by the local small business program—they kind of know it's there, but it's like anything else, it's just something we check a box and it's no more than that in their minds. It's got to be embraced by the city, the city technical departments. If it's not written into the RFP, for example, you may have a local small business requirement but in the technical section it says we need to see five years financials. You need to have done a similar size or type projects in the last five years, but none of those projects have been done in the region in the last ten years, you immediately just lost your local small business participation, unless you just happen to be one of the lucky few who were still around the last time they did one.

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They put out a request that says, you must have done ten of these, and let's say you've only done three of these. You are at a disadvantage. And then they go look at the dollars.

Some owners thought that certified prime firms should be permitted to count their own participation. A criticism of DeKalb County's LSB program is that small firms are forced to subcontract to other small firms.

The trouble is coming in with the small minority contractor, sometimes the capital is not there to take on any other individual, to train them, sometimes we have to train other young employees we adopted under our wings, because they don't have the skill. They

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want the work, but they don't have the skill. We are here trying to train them to do the job, and at the same token we don't want the job to screw up.

Mentor-protégé programs were repeatedly mentioned as one approach to increasing the capacities of small local firms.

[A mentor-protégé program is needed s]o companies like his company and his company could take on other small companies and be able to take them on in the wings.... [ARC can] encourage other bigger companies to help you to finance as you go along and they're going to ride your money for 30 days after they get paid; they have to pay you seven days after they get paid. Well, it also helps the small company to even piggyback on the bigger company's credit to get certain things so that they could do the work and be able to step up.

"Unbundling" contracts was suggested by a range of participants to increase opportunities for small firms to perform as prime contractors. Large contracts were out of the reach of the great majority of M/WBEs and other small firms.

Some majority males supported the small business approach in lieu of a M/WBE program.

I don't feel like the subcontractor base here will support that kind of program. I don't think those people are here in this community, and it turns out to be counterproductive because to get a DBE, you're going to take money out of Augusta to go get somebody out of Atlanta just to meet requirements when you could be using-- How about using local businesses instead of minority businesses? Bring more money into Augusta.

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This is my fear [overly narrow small business setasides] as to what's going to happen here is that it's okay, as far as I'm concerned, to help if you will small organizations out, be it minority or small businesses. But if you pigeonhole it so far that it's costing the taxpayer money, we're not accomplishing anything, other than just handing money to somebody else.... To pigeonhole it that far as a small business is another thing. To take it where you really effectively [inaudible] competition.

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The local government should do business with local businesses.

There was also significant support from both M/WBEs and non-M/WBEs for a small business setaside, especially in those industries without many subcontracting opportunities, like consulting. This would be a new component of the LSBOP.

A few majority owners cautioned that the LSBOP could have adverse effects.

If you don't have a good definition of what small is, you may be too small, and then when you get ready to bid one that you think we have a good shot at it. You say, well no,



you have your little projects over here. I don't think that's fair at all.... There could be some reverse discrimination there. I mean you could always have a larger firm say, no, they've got their small projects to bid, that's why you should select us. You just have to be careful the way you set it up, and I'm sure the City will be.

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The ultimate goal should be quality. I'd rather compete against a quality firm from Atlanta, who I'm on a level playing field with, than somebody who is not doing quality work locally.

### **3. Race- and Gender-Conscious Initiatives**

#### **a. M/WBE Programs**

In general, minorities and women reported that race- and gender-conscious contracting programs are needed to ensure full and fair access to government contracts. Being certified created opportunities that otherwise would not have presented themselves. Affirmative action contracting programs were seen as vital to the continuing viability of their companies.

So I think that when you take this back to the County, you have to make this known that this [difference in the length of time in business between M/WBEs and majority male-owned firms] is the divide.... So, what you need is these opportunities, because you've got a bunch of people who have had one leg tied trying to run the race, and it's like, "Okay, now we can let you lie down. You can come on in, too."... [I]f you take this away, it's like tying your leg back up again and saying, "Good luck. God speed," and that's just not going to work.

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The certification has been beneficial for me [as a WBE] in regard that it's a bonus. When you're going toe to toe and it's your work against the other work, it's this, "Okay, well what's your advantage point?" That certification is where it's come in handy.... [W]hen you're coming to the door and somebody has 20 years experience, it's an arsenal piece. So, you definitely want to have it because you never know. It's like having a bow and arrow on the field. It might not work every fight, but it never hurts to have an arrow.

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However, one MBE disagreed.

[The MBE certification has n]ot really [been helpful]. Here again is another way to pigeon-hole a person. In some cases, I'd rather just be considered a business. Other than my name and other than them seeing me in person, they may not know who I am and I may have a better chance than to be on a list and the list does no good.

A woman owner has not applied for certification.

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[W]e could take advantage of the woman-owned business, and we choose not to because there's just too much paperwork. It's just too much work to do....

A few firms stated that ARC's prior DBE program had not increased their opportunities.

[The suspension of race and gender goals] made absolutely no difference. I received work that had absolutely zero to do with their process.... I was getting the impression the same people were just automatically getting [the contracts] and they don't really feel the need to network with anybody. Then, when I began to approach them and say, "Hey, I'm a small local owner," and I said locally owned business owner, they were disinterested because most of these people were not local. So, the money is going outside of the City. Secondly, they're bringing down all the small minority-owned, woman-owned companies with them. So, they don't feel a need to use anybody local, even though in theory, it's supposed to be that you're encouraged to work with the local people. When I finally did get a contract, it was only because I came in as a sub with a larger company out of Atlanta, and I already had relationship with them.

### **b. Outreach to M/WBEs**

ARC holds pre-bid conferences for individual solicitations. Some M/WBEs recommended that ARC should hold more procurement fairs, where departments meet with potential vendors. One WBE recounted that this has been a successful approach for other agencies.

[The departments] were all out there and it was just this little symposium that we went to, and I did get one little piece of business.

Some owners stressed that the mission of any future M/WBE program must be fully integrated into ARC's overall planning and procurement processes.

When they have small business procurement fairs, most of the times, only the procurement people show up, not the technical managers. Though the procurement people and the City may have a program in place, for small business and minorities and local small business, whatever, the technical people are not on that same page.... [O]n page six it may say we have a program, but on page seven what they say in page seven ignores page 6. It seems like these two groups are not talking.

Several participants suggested ARC establish a committee composed of ARC personnel from the procurement and other critical user departments to address issues of access to information, specifications, qualifications, payment, etc.

An advisory committee needs to be set up where some of these people are sitting on that to make sure that it is fair for all the community.

### **c. Supportive Services Programs**

More supportive services were repeatedly cited as a critical need.

[Y]ou made everybody here twice as good as they are, you probably wouldn't have to help us with it.

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[W]e've had a mentor/protégé program we were involved in, and that helped us a lot.

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[A mentor-protégé relationship] came about because that was the way that the larger company felt it could win, and we had a good track record, and they hired us, and we worked together. They realized that these guys know what they're doing. And we were cheap.

Bonding and financing assistance was another approach owners urged ARC to adopt.

[T]he Small Business Development Association offers a wonderful program called Fast Track, and that program really benefited me in understanding how business operates. So, something like that offered in Augusta is a first step to making sure people can handle it because it's a lot as a business owner.... It's about engaging all of your banks and perhaps coming up with a program where they all hitch together and say, "Okay, this is our MBE opportunity to finance," and then they have a series of programs and even a mentor in the bank. Have a banker come on for the first three months in business because I was just having this conversation with another business owner that when you first go to the bank, when you really are set up to do good in business, they won't give you the money. They say, "Well, you've got to show us a track record." So, when you're hanging on by a string and you've got this shoddy track record two years from now, they're like, "No, we can't give you the money," versus if you had say a banking mentor that says, "Okay, we're going to give you this money and we're going to show you where it needs to go in the business." Then I think you're winning that way, and I think that if we did more like that, you'd have a lot more winners and then the bank could get more money because then the business would be growing versus it being this adversarial relationship again.

### **d. Certification Standards and Processes**

Several firms, both M/WBEs and non-M/WBEs, expressed concerns about "front" firms, that is, enterprises that were not legitimately minority- or woman-owned, managed and controlled.

I think [ARC] need[s] to do some further [certification] investigation for themselves.

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I think it should make it a business, not a pass-through business.... I mean somebody needs to set up a system where everybody's qualified, and somebody needs to investigate these people and make sure that they're qualified to be listed as a MBE.

### e. Meeting M/WBE Goals

The goal setting process and meeting contract goals elicited many comments. Few had any experience with meeting goals on ARC projects, so comments were often directed towards general familiarity with government affirmative action contracting programs.

Some majority male owners opposed the concept of race- and gender-conscious programs.

Why does all of that even matter? Because on the general contractor side, it's either qualifications or price, everybody ought to have the same qualifications as whether you're White, Black, or woman, or whatever, it should be the same.

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[The WBEs the prime engineering firm has utilized] are not disadvantaged—they do more business than we do. I think it goes against the whole point of the process. But we do use those two and that's about all we use. There's another woman-owned environmental that we use out of Atlanta, and between the three of them, we were able to meet all of our goals, whether it was local work, transportation work, statewide, but I think the process makes us do some things that we wouldn't normally do, and I think it misses the point.... These three firms, they're doing great whether I give them work or not. Maybe they originally needed this to help them start off, but right now, they have an easier time getting work than I do.... I would much rather give it to somebody locally.

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The thing that I don't like about it, it rewards minority or small businesses. A lot of times those businesses are a lot of times a little bit higher risk. You mentioned they can't put off payment, or they've got financial trouble. The City is putting all the risk of that company on us. Once we as the GC hire that subcontractor, say they hold up the schedule or don't perform or default, the City's not going to help us in any way recover from that. I just feel like they're just asking us to take on unnecessary risk by making us hire those people. Now if they want to set aside work and contract directly with them and let the City take the risk, let them deal with it. Don't make us take the risk of hiring someone who's not qualified to do the work.

One non-M/WBE stated that the standards and processes for meeting goals were unclear.

Make it clear what type of subcontractors they're asking for [on the subcontractor form].

Several prime firms commented on their difficulties finding M/WBEs.

I did a project for [ARC] that required certain participation, minority participation. I had two problems. First of all, the problem I had was finding an infrastructure to find the people. If you want to model after the City of Atlanta, fine. You've got a lot of minorities in Atlanta. Say out of a \$30 million contract I've got to get 15% minority participation. You can't get a lot of mason and concrete finishers. You've got to get some big

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subcontractors to help fill that participation, and what you end up doing is you end up creating people to sit around, you know, manufacturing these people because they don't exist. That's the problem with the City of Augusta, trying to create something that's not there.

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From our standpoint, we really haven't had any problems with [procurement], other than you know, trying for us to search out and find that piece of the pie, the minority, or the woman-owned, that best fits the job and we can work with. And if we find them, we use them, if we don't, that's a shot that we take, whether we get selected or not. We're not going to just stick somebody in there just to get the job, because it's not going to be in the best interests of anybody.... We just play it that way. We've been fortunate there. With the performance-based and with the interviews, it's been fine. We go in, we do our dog and pony show, and if we're good, we're good.

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[W]hen we bid the job ... you get all those numbers coming in and you get to have one say that does fit the DBE. "Oh, I finally got one. Great." But if he's not low, I can't use him. What am I supposed to do then? I tried. I try to solicit and he wasn't low bidder.

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There are still many minority firms that do get jobs from out of town, so I don't know what the Commissioners' complaint would be. Some of these out of town firms are inferior work, we're talking about here, because I've had to coordinate with these people on my projects, and it's been a disaster. We've actually spent more time on our free, you know gratis, to help get the project through just so we get could the plans to bid.... They were all out of town firms, and the work they had was very inferior work, to what was supposed to happen.

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I think the onus is on the contractors as bidders to make the [judgment whether] those small business or minority businesses or whatever [are qualified].... When there is some sort of an incentive to hire those people, you still have to use the judgment. It's no different than you're the low bidder on the project and you know that there are certain subs out there that are going to be low, but you really don't think they're qualified. You have to make that decision. Are you going to hire that sub or are you going to hire the guy that's going to do the work because you've worked with him and you trust him and you know he will perform? It's really no different. You can't-- Sure. Maybe your proposal is going to look better if you have a certain partnership with a certain small business or minority firm. But at the end of the day, if you don't think that they can perform, you have to walk away, and that's a tough decision to make. I suspect that at the end of the day, if they don't perform, you're going to end up holding the bag. So you have to decide if you're willing to take that risk or not. It's not any easy decision.

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We're not seeing the same issues with woman-owned businesses that we're seeing with minorities, whether it be black, Hispanic-owned businesses. There are a lot of minority businesses in Augusta. Basically, it comes down to whether or not they're qualified from a manpower standpoint, financially stable. There are a lot of issues there, especially besides the project that we're dealing with where we just know they would not get to have that size project. On small projects, we've used minority contractors and not had any issues with them. Where it gets into a situation is where it becomes goals and requirements on substantial sized projects where you don't have qualified minority contractors who can handle that size of a project.

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[When the general contractor] hired a subcontractor who's a minority, [the DBE has] to pay that bill. We can't get a joint check. So if they come to us to ask us if we'll supply the [construction materials], and they have terrible credit, we either make the decision not to deal with them, or we can go back to [the general contractor] and say, "Will you consider a joint check?" and he says, "I cannot do that under the guideline of the state ordinance."... It used to be an okay thing to do. Now, the small business or the business managers got the bill to show that they run on their own. Well, they've got no credit. I can't put out hundreds of thousands of dollars guessing that they're going to pay me on time.... [W]e have [turned down those kinds of opportunities].... [But] a couple of [DBEs] from this area are real good.... I think a lot of times they get the job only because of the requirement that the general contractor use them. So, they end up having to use somebody to get their contract. So then, these guys come to town. That's great, glad to see them. I hope they do good business. But you run a credit check, and it's not worth taking that risk

It was especially hard to find local M/WBEs.

Qualified [minority] subcontractors just aren't here.

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We've had good success with our [M/WBEs]; it's just out of town. It's not ever been in town, and we've used a female landscaping firm out of Athens before, and that was okay ... we actually hooked up some people in Atlanta we knew who had used her before, purely for the minority participation. Then on [a large project] we're using a Black architect from Greenville, structural engineer, who has turned out to be a great guy, and we're going to use him again. We'd do that more if we had some.

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I don't know if there's really an infrastructure in the City of Augusta that's ready to jump on that [M/WBE program] bandwagon. I know what they want to do. I'm just not sure that there's folks out there to do that.

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[S]ay they're hiring an architectural firm for a project, and they are looking for a minority firm. That's going to begin to exclude everybody in Augusta, so now our tax dollars are being sent out of town to keep this minority firm, and that concerns me.

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[T]here's nothing like a label that you can put on all of them. I'm a little biased. I think if you have a level, it should be somewhat, try to provide for your DBEs, but the problem is that if you don't have any local ones, then you're sending your tax dollars out of what we call local, what we call the marketplace.

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When you have a market that won't produce the minority firm ... how can you just make them [snap fingers] and they aren't here? I would probably have a little better taste in my mouth for it, if they would move in here, set up shop, and try to practice here among us.

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I would welcome [minority architects] to come in, hey, I'd bring one in to my firm if I could, I can't even find a white male who wants to come work and live in Augusta and be an architect.... It's something about coming and staying in Augusta, and living in Augusta. It's just not happening. That's why we're still a dwindling breed of architects, because there's not-- Everybody wants to go to Greenville, Charlotte, and Atlanta.... It's the same thing with engineers.

Engineers and architects, both M/WBEs and majority firms, found it more difficult to meet goals than did construction firms. Minority and women engineers agreed to that is difficult to find and retain talented people of color and women in the Augusta area.

[F]rom the architecture standpoint trying to put together a team and get minority participation has been very difficulty. There are no Black-owned engineer firms in Augusta.... In this area, we just don't have it, not that we don't want to use it. We'll have to pull in from out of town somewhere, find somebody we know from wherever. And it's difficult to work with somebody and you don't know them and just put them on your team. That's been our biggest concern

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For the last eight years, I've been trying to recruit minority engineers because we believe that what we really need in Augusta is to build a quality firm that supports minority engineers at home. I've had a very difficult time doing it, mostly because I really don't have enough work to support the salaries that it would take. I've had two fantastic African-American engineers that I would love to have; our workload just doesn't support it.... It's long-term things that we're looking to do, so that Augusta has a top-notch

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company that can do quality work, and it caters to minority folks. Because I know quite a number of Black engineers, and they make good money when they get out of college because there's a very limited number. The ones from Augusta, they don't want to come home.... The solution isn't to throw money at Atlanta. The solution is to build it here, is to have and give them a place here.

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In working in this area, when we came here we had a one-year contract. The first thing we tried to do, we hired [a local] engineer.... However, after one year, you don't have any work from them, so we had to move the engineer to Atlanta.... It is hard for them to come back to Augusta because of the point that he made, that we don't have sustaining work.

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If the work is here and the talent is not, you're going to have to import them. The questions is when you import them, are there local firms, is there enough participation by the local firms whereby it's sustaining enough for them to hire a new engineer.... The selection committee has got to also have at the back of their mind it's about creating sustainable job levels and talent capacity in the city, such that it is written in such a way in the RFP, because that motivates outside firms to either establish business here or mentor, at a level where a local firm can afford to hire somebody on a full time basis.

A few M/WBEs stated that "pass through" firms were sometimes used to meet goals.

[T]he majorities recognized the game. They recognized the game that, "Okay, we can get it subcontracted with to you, but we want you to use this 'white' firm or majority firm to get the work done and we just pencil him in."

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Majority companies will ask you up front if you will front, if you will just take a rider for a payment.... I've been offered several pass-throughs. But, I think at some point, you don't want to report them because you don't know what bridge you're burning. So, you don't want to report that, "Okay, well you know you hired a company that offered me a pass-through or they only bid it because they wanted to essentially pay me off," but you've got to hold your ground. Ask them for service. I have been able to actually do something, or even if it's just something small, I've accepted things where I've gone toe to toe and fought and I may have gotten only \$4,000, I did one thing, but I'd rather do that than just take a \$20,000 payoff just to let them use my name.... I don't know how we can educate contractors into understanding that now this is a different age where you have minority companies who can perform work. These minority companies are not looking for handouts. So how can you redesign your program to be more effective for that type of company?

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I've also seen the guy who [the prime engineering firm] actually subbed [to], he's "minority", but he couldn't even design a two-anchor fire station. He's getting the work, being a minority, throwing the people in there, but he doesn't have the pride in what he does and the technical skills to get it done. In some cases, you do have minorities who just get in the program, and they know that the prime guy has responsibility of the job ultimately, so they can just stick their employees in there, send them some invoices, get paid, and not worry about quality work. It's about minorities taking pride in what they do, and making sure that their work is better than or equal to the standards of the prime guy.

Several majority-male-owned firm owners also described "pass through" or "fronting" situations.

Basically, they were pass-through folks. They didn't actually have a business. They could hook you up with somebody who actually is, and that's all you were doing is passing money through them.

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There are three, or probably more than that, that we deal with on a day-to-day basis on the supply side—three minority distributors. They have no warehouse. All they have is an office. Maybe one of them probably even works out of south and I've never met him, we just call on the phone.... All it sets up is a guy sitting in the office that has a little bit of education that says, "Hey, I need for you to go over there and do the plumbing, Mr. Plumber. All I'm going to do is get the paperwork," and they're just paperwork stuff. That's all it is. But none of these guys-- We deal with three of them on a day-to-day basis. They don't have a warehouse. They don't have a truck—well, one guy's got a truck because that's what he drives.... [we] just drop-ship it to the site.

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Say you're a minority business. Sometimes you will actually call me and order it and then have me ship it to a plant. Sometimes I have had in the past where the sub itself would call me and say, "Hey, I've got to run this through this guy," and then basically all he is, is just a pass-through. That's it, just to meet the minority requirement. That's what it's setting up. It's not setting up-- I mean it would be good if it was really setting people up to start a business and to legitimately come into the workforce and say, "Hey, we're going to grow into an employer." That's not how it's happening.

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This guy just sitting in an office somewhere and passing paperwork. It's not just on the subcontractor level this is taking place. It's taking place in the general contracting level, too. We were approached roughly about a year and a half ago by a firm that wanted to submit on a-- It was a minority business and disabled veteran set-aside on a project in Albany, Georgia.... We had them come to us and asking us to participate. We'd be the contractor on the job, but the actual contract would be written and go through-- they had already lined up a retired [officer] and had already lined up a minority business partner. That would be who the contract would go through, but we would be the contractor.... It's

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not really a joint venture. We would have our own MBE set-aside company. We would set up this own company, yet they would be the individuals the contracts would come through. We would be the contractor on the project. Like I say, it's not a legitimate business. They're not establishing a legitimate contracting business. All they are is a broker. They've learned how to play the game, and they're making money by playing the game. That's all they're doing.

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What few woman-owned businesses we've dealt with had some issues.... [I]t's kind of a setup with the wife up as the business head, but then we do have one that's woman-owned and she's very much a part of the business.

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It seems like there are some people that make a living off of these kind of programs, and they claim that they can do dozens of different services where they didn't do two or three right or they shouldn't be going after all these things that really isn't their business.

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One white male admitted that he has participated in a WBE "front" situation

I've actually got my wife set up in case sometimes we do [have to try to meet a M/WBE goal]. We'll go that route if we need to.

Despite the challenges of meeting affirmative action contracting goals on government contracts, most prime firms reported that M/WBEs performed at or above expectations.

[W]e haven't [had performance issues with MBEs], we're using this firm out of Greenville, structural. We're getting ready to use them again, because they've been real good.

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We don't have any problems [with WBEs]. As a matter of fact, they're one of the better steel suppliers we deal with, but not necessarily here in Augusta. But, we've not had any problems with that.

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[W]e usually use a woman-owned traffic consultant, out of Atlanta, and a woman-owned geo-tech out of Atlanta. They're both very qualified, they both do good work. Don't hesitate to use them.

### **f. Contract Performance Monitoring**

Finally, concerns were raised about how ARC will monitor compliance with any new M/WBE initiatives.

I don't see how procurement or the DBE office can or has any resources to do anything about [contract performance monitoring].... I think the real problem is there is no real oversight once you do get the contract, especially if you come in a sub.... [The DBE office] just doesn't have all the resources to help us get the contracts and to keep the contracts.



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# NERA

Economic Consulting

NERA Economic Consulting

1006 East 39<sup>th</sup> St.

Austin, Texas 78751

Tel: +1 512 371 8995

Fax: +1 512 371 9612

[www.nera.com](http://www.nera.com)